CAN and MUST

a diachronic study of two modal auxiliaries in English

by

Stine Abelsen Grønbech

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Abstract

The present master's thesis is an account of the semantic development of the two modal verbs CAN and MUST in the history of the English language. They were investigated through the use of *the Helsinki Corpus of English Texts*, where two genres were the focal point: historical and legal texts.
By using approximately 100 examples of each modal, spread across Old English, Middle English and Early Modern English, the study presents the semantics of the modals at different points in time, and establishes how the meanings have changed throughout the history of the language.
There is a focus on central and peripheral meanings with the modals, where a central meaning of the present day can be found as a peripheral meaning in older language, and other peripheral meanings may serve as an intermediate stage between two central meanings.
MUST is found to convey the meaning of 'permission' and 'obligation' in Old English, 'permission' being the central in Old English, although 'obligation' is found as a close-to-central meaning as early as mid Old English. The 'ability' sense and the negated 'permission' sense may have functioned as the bridge between 'permission' and 'obligation'.
The development accelerates in Middle English, and by late Middle English we can be certain that the 'permission' sense is lost. The next step of development for MUST is the epistemic sense, which comes into use in Early Modern English.

CAN has a full verb sense of 'to know' in Old English, but the 'ability' sense is at this stage present as well. The peripheral meanings that exist for CAN are very close to the meanings of 'to know' and 'ability', and it is therefore difficult to see a clear shift. The meanings glide into one another, which gives a continuum rather than a shift.

The historical texts show earlier and different signs of development than the legal texts, but the difference is not as striking as hypothesized. However, the variety of senses found in the historical genre is great compared to legal texts, which implies that this is a more innovative genre. Historical texts seem to be an appropriate genre for investigating change and development because of the language's closeness to spoken language, as opposed to legal texts, which are as far from colloquial as one can come.

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1. INTRODUCTION

1.1 Presentation of thesis

This thesis concerns itself with modality in the history of the English language, using the modal verbs (or 'modals') MUST and CAN as a resource for establishing a picture of how modality develops in general, and, more specifically, how the semantics of the two verbs has developed. The development of the modals is also seen in light of genres. Two different genres were included in the material: historical texts and legal texts. These were chosen on account of their being very different, and it could thus be assumed that modal verbs would behave differently in the two genres.

Modality is an intriguing concept, first and foremost because it is so hard to define, as is briefly explored later in the present thesis. Secondly, because modality by definition is extremely subjective it is hard to give a general overview of the different types of modality and modal verbs, which makes the process of interpreting examples and describing the functions of the verbs quite problematic. However, modality is a topic that has been explored by many linguists, and there is consensus on a general level.

It could be argued that English language history and diachronic studies provide an essential background for understanding Present-Day English linguistic phenomena, and when it comes to the concept of modality this seems to be plausible. As modal verbs express such a variety of concepts, and are very different in their semantics, it could be essential to know their background in order to arrive at a full understanding of the concept of modality. The group of modal verbs is particularly interesting because it still is undergoing changes (cf. Collins 2009), and thus the path the modal verbs have taken will be of great importance in following where they are headed and why they are developing in the manner they are. However, this thesis does not seek to explain the semantics of today's modals, but merely to explore the past development of the two chosen modals and thus give the reader a background for the Present-Day situation.

In establishing the semantics of these modals, the Helsinki Corpus of English Texts was used to find material to work with. The examples are from Old English, Middle English and Early Modern English texts. The instances were sorted into time periods and genres, translated and categorized according to meaning.

The working hypothesis was that the modals developed more rapidly in historical texts than in legal texts because more colloquial features of the language are used in this genre than in legal texts. Additionally, it was sought to present the general development of modals, both through the material and as it has been presented by previous linguists. This serves as a background for the thesis, and as the material will show, the story of the modals as outlined by some of these linguists might be questioned.

The material was somewhat difficult to handle, first and foremost because early English is extremely heterogenous, and a word may exist in many different forms. Moreover, there exists a limited number of texts from this time, from which the material for the present study suffers. First of all, a very high number of instances was not found in the corpus for the different periods, which may not give a valid quantitative analysis. However, as translation and categorizing are time-consuming tasks, there was not enough time left to carry out additional investigations done. This compromises the validity of the proposed tendencies in the development of the modals, but the material included in the study was considered to suffice for an investigation at this level. However, topics for further inquiry and an expansion of the present thesis will be explored and presented in the last chapter, as there could be more definite conclusions made from a larger corpus of examples. Secondly, because the corpus that was used has not tagged each word for lexical information, one has to search for all the different forms of a word, which means that other lexemes could be, and were, included in the material. Some of the instances of the form <cunne> for CAN turned out to be <cunne> meaning Old English *cynd* or *cyn*, and quite a few of the instances of <most> turned out to be the adjective *most*, and not a form of MUST. These had to be extracted from the material before it could be investigated further.

The different forms of the modals that were searched for were taken from Gotti *et al.* (2002). The categories in which the different meanings of the two modals were placed were mainly from Goossens (1987) for MUST and Bybee *et al.* (1994) for CAN.

1.2 Background

Languages are in constant change, in all areas and at every level.

According to Baugh (1951: 17-18)

> there is no such thing as uniformity in language. Not only does the speech of one community differ from that of another, but the speech of different individuals of a single community, even different members of the same family, is marked by individual peculiarities.

Strang (1992: 6) explains that

> The main levels of organisation in language – sounds (phonetics – phonology), words or vocabulary (lexis) and grammar (morphology – syntax) are all three subject to the universal condition of mutability. The change takes various forms, and varies in pace, but operates at all levels.

The concept of language as something inconstant and as something that behaves in different ways at different times makes language very exiting to work with. A diachronic study of language may give valuable insight into the language of the present day, in the sense that one can acquire a deeper understanding as to why it behaves the way it does, both considering how it currently is, and in understanding where it is headed. One might thus look at various parts of the language to examine its variations over a given time period, and the concept of modality and the two modal verbs CAN and MUST have caught the attention of the present study.

Although modality is a topic that has been studied extensively by linguists since the time of Aristotle and all over the globe, there are still disagreements as to how to define it, along with differences of opinion regarding terminology and how to classify modal auxiliaries, or 'modals' for short, and their meanings. According to Perkins (1983), CAN is a modal that has been difficult to define, and this is a consequence of the disagreement and confusion among linguists regarding modality. The confusion concerning modality is shown by the fact that

> Few linguists have an adequate working definition of modality, and the term 'modal' is used sometimes to refer to a syntactic category and at others to a semantic category. The same is true of labels such as 'root' and 'epistemic', despite the fact that there is no straightforward isomorphic relationship between the semantic notions and their syntactic realizations (Perkins 1983: 31).

Leech (2004) seems to think that the reason modal auxiliary verbs are difficult to account for is that "their meaning has both a logical (semantic) and a practical (pragmatic) element" (2004: 72). One of the numerous definitions of modality, given by Bybee *et al*. (1994), says that "modality is the grammaticalization of speakers' (subjective) attitudes and opinions" (1994: 176), whereas Halliday and Hasan (1976) use slightly different concepts in defining it as "the speaker's assessment of the probabilities inherent in the situation (…), or, in a derived sense, of the rights and duties" (1976: 135). Gotti *et al*. (2002) write that "as it is the expression of some evaluation by the speaker, modality adds an overlay of meaning to an otherwise neutral semantic value of the proposition" (2002: 19-20), and Quirk *et al*. (1985) follow the same line as these linguists in observing that "at its most general, modality may be defined as the manner in which the meaning of a clause is qualified so as to reflect the speaker's judgement of the likelihood of the proposition it expresses being true" (1985: 219).

Diachronic studies aim to investigate to which family a language belongs, how the language got to where it is today, and what it looked like at various stages in the past.

As stated in *the Encyclopaedia Britannica Online*, historical linguistics is

> the branch of linguistics concerned with the study of phonological, grammatical, and semantic changes, the reconstruction of earlier stages of languages, and the discovery and application of the methods by which genetic relationships among languages can be demonstrated (http://www.britannica.com/EBchecked/topic/267374/historical-linguistics).

Lightfoot (1979) says, when speaking of diachronic syntax, that "a fundamental prerequisite for work in diachronic syntax is that one should be able to compare the grammars of at least two stages of a language" (1979: 5). This can also be applied to more general diachronic linguistics: If one is to look at the development of a language, it is essential to have the possibility of comparing different stages and varieties of the language. In doing this, one can observe how language changes from one period to another, or how it has remained unchanged.

1.3 Aim and Scope

The general aim of the present study is to show how modal auxiliaries have behaved through the history of the English language through the use of a diachronic corpus – The Helsinki Corpus of English Texts (Diachronic Section). More specifically, it attempts to explore how modal auxiliaries behave semantically in the genres legal text and historical text. Legal texts are known to have more conservative language than other genres, and historical texts provide a counterpart to this as the language comes as close to spoken language as we may get in Old English texts.

To limit the investigation, the modal auxiliaries CAN and MUST will be the only modals with which this thesis is concerned. This decision was random, although they are of particular interest because these two verbs were, according to *the Cambridge History of English* (1992) the only two pre-modals that in Old English did not express any epistemic meaning. Additionally, as will be discussed below, although these two modals differ semantically today, they are connected through their semantic development. Moreover, one may assume that they can provide us with good insights as to how the modal class of Present-Day English verbs came about, precisely because of their different semantics. As they could represent the two extremes of a sclae of meaning, MUST covering the concept of 'obligation' and 'logical inference' and CAN covering the concept of 'ability', 'permission' and 'possibility', they can provide a more general picture of the modals as a group and their development.

There is a high number of aspects in the evolution of modals one may consider when looking at Old, Middle and Early Modern English texts. These are, for instance, how the verb phrase has been structured; the other lexical content of the sentence, i.e. which other elements are frequently found alongside modals; one may look at how modality is expressed according to genre/register; the type of modality they convey, etc.

However interesting all these aspects are, one cannot cover all of them in a master's thesis such as the present, and thus this thesis focuses solely on the semantics of the two chosen modals in the two selected genres: law texts and historical texts. An assumption made early in the process was that early historical texts would include a more varied range of modality than legal texts because the language of law is known to be conservative. Epistemic modality, for instance, was thus expected to be rare in the legal documents investigated, as this type of modality is a later development of the modals (cf. Traugott and Dasher 2002). Other semantic

developments of modals may also not have been effected as fast in legal language as in more spoken-like types of genres, such as historical texts.

2. FRAMEWORK

Chapter 2 is devoted to the framework of the present thesis. The concept of modality is presented in section 2.1, modal auxiliaries are looked at in section 2.2, and how modality has behaved in the history of the English language is thoroughly explored in section 2.3. The present-day modal auxiliaries are followed from their preterite-present stage in Old English through Middle English and Early Modern English up to Present-Day English. As there is a connection between modal auxiliaries and tense to be considered, section 2.4 is devoted to this. Section 2.5 concerns itself with semantic and syntactic change, both in general and with specific focus on the modal verbs. This chapter serves as a background for the analysis, and the concepts with which the present thesis concerns itself are introduced and defined.

2.1 Mood and modality

As can be summarized from the definitions of modality given above, modality concerns itself with coloring a proposition in the direction the speaker wishes, on purpose or not, using one or more modal elements.

In Present-Day English (or PDE) modality can be expressed through modal auxiliaries (*can, could, may, might, shall, should, will, would, must*), quasi-modals (*be to, have to, ought to, dare to, be supposed to,* etc.), mood (e.g. the subjunctive), and modal adverbs (*probably, supposedly, indeed,* etc.). Lexical verbs can also convey modality, as many of them carry connotations that give a proposition less of an objective meaning.

Mood can be categorized as morphological modality. Mood affects the verbs through verb inflection, which in turn affects the entire proposition, and is not a separate 'group' of words, as with the other modal expressions. As put by Collins (2009), "the grammatical realization of modality via verb inflections is known as 'mood' " (2009: 11). The mood that is connected to modality is the subjunctive.

There are three moods in PDE, the indicative, the imperative, and the subjunctive. The indicative is the 'normal' mood - objective and factual. The imperative is used in direct commands where no subject is required. The use of the subjunctive is limited in PDE, but has played a large role in the history of English. Today, it is used in more or less fixed

expressions, as, for instance expressing hypothesis, e.g. *if I <u>were</u> you*, or in sentences expressing 'wish', as in *long <u>live</u> the Queen*.

Modality is commonly divided into subcategories. Bybee et al. (1994) include four types of modality, these being 'agent-oriented', 'speaker-oriented', 'epistemic', and 'subordinating', the latter of which is not discussed in the present study. Agent-oriented modality will "report the existence of internal and external conditions on an agent with respect to the completion of the action expressed in the main predicate" (1994: 177). Speaker-oriented modality exists in "utterances which impose, or propose, some course of action or pattern of behavior and indicate that it should be carried out" (1994: 179), as reported in Lyons (1977: 746), e.g. commands or requests. Bybee *et al.*'s definition of epistemic modality reads (1994: 179):

> Epistemic modality applies to assertions and indicates the extent to which the speaker is committed to the truth of the proposition. (...) The commonly expressed epistemic modalities are possibility, probability and inferred certainty.

Others, such as Palmer (1988) or Perkins (1983), have the same three subcategories, albeit with a different terminology. Speaker-oriented has become 'deontic', agent-oriented goes 'dynamic', whereas 'epistemic' remains. These are thoroughly defined by Palmer, using the following examples

John may be in his office	(epistemic)
John may/can be in his office	(deontic)
John can run ten miles with ease	(dynamic)

which are explained thus (Palmer 1988: 97):

> Roughly, the difference in meaning between these three is that the first (epistemic) makes the judgement that it is possible that John is in his office, the second (deontic) gives permission for John to come in, the third (dynamic) states that John has the ability to run ten miles with ease.

Coates (1983: 20-21), however, finds this three-way division unsatisfactory:

> The modal logic term 'deontic', used by some linguists (…) seems to me inappropriate, as it refers to the logic of obligation and permission (...). Typically Root modals, such as MUST and MAY, cover a range of meaning, of which 'Obligation' and 'Permission'

represent only the core.

Leech (2004), as Coates, makes a divide between only these two categories of modality, 'root' and 'epistemic', and explains (2004: 84):

> ROOT MODALITY is the ordinary, more basic type of modality denoting constraint and lack of constraint in situations (typically situations involving human behaviour) in our universe of experience: it includes 'permission', 'obligation', 'theoretical possibility' and 'requirement' (...). EPISTEMIC MODALITY is more oriented towards logic, dealing with statements about the universe, and constraints of likelihood on their truth and falsehood. It includes 'practical possibility' (*may*) and 'logical necessity' (*must, have to*).

According to Perkins (1983) there exist "three sets of general principles (...) - namely rational laws (or the laws of reason) [epistemic modality], social laws (or the laws of society) [root modality], and natural laws (or the laws of nature) [dynamic modality]" (1983: 12), and these three principles "define three different types of possible world in which the truth/actuality of propositions/events may be assessed (...)" (ibid.). However, Coates's (1995) claim that "the distinction between root (or agent-oriented or deontic) modality and epistemic modality has proved enormously useful to those attempting to describe the modal systems obtaining in the world's languages" (1995: 55) is widely accepted, and her two concepts, root and epistemic, will be adopted for the purpose of the present study.

2.1.1 Epistemic modality

Epistemic modality has been said to be the easiest to recognize, and by some, e.g. Coates (1983), has been claimed to be "the most clearly relevant to normal language" (1983: 18). This is of particular interest to the present investigation, because it is supposedly well-known that root meanings preceded epistemic meaning in the history of modals, as pointed out by Traugott (1989: 36). However, modality can be expressed by other means than auxiliaries (e.g. the subjunctive in OE and ME) and thus the concept 'epistemic' will have lived longer than the modal auxiliaries' ability to express it.

In his book on modal expressions in English, Perkins (1983) writes that "many identify epistemic modality (...) with the concept of belief" (1983: 10). Coates's definition of epistemic modality reads: "It is concerned with the speaker's assumptions or assessment of

possibilities and, in most cases, it indicates the speaker's confidence (or lack of confidence) in the truth of the proposition expressed" (1983: 18). *Epistemicity* is by Traugott and Dasher (2002) specified as "[epistemic modality is] used to express the speaker's degree of commitment (…) to the truth of the proposition" (2002: 106). According to Coates, epistemic modals can be placed on a scale where the one extreme is confidence, and the other is doubt (1983: 18), and another that measures subjectivity, although "the overwhelming majority of cases are unambiguously subjective" (1983: 20).

In the sentence *It must have been love,* we have an instance of inferred certainty and thus inarguable epistemic modality. Another example, *They must be married,* offer more ambiguity. This sentence can either mean that 'I infer that they are married, because they behave in a certain way' where the meaning is epistemic or 'they need to be married, they are obligated to be married' where the modal auxiliary carries a meaning of root modality.

Epistemic and root modality can often be hard to categorize, as examples may be ambiguous. However, the context often gives some clue as to how to interpret an utterance.

2.1.2 Root modality

Root modality is more difficult to characterize than epistemic modality, and, according to Coates (1995), "encompasses meanings such as permission and obligation, and also possibility and necessity" (1995: 55). Biber *et al.* (2006) categorize modals and semi-modals into 'intrinsic' and 'extrinsic' modals, which correspond to root modals and epistemic modals respectively, and explain that "intrinsic [root] modality refers to actions and events that humans (or other agents) directly control: meanings relating to permission, obligation, or volition (or intention)" (2006: 485). Traugott and Dasher include 'compulsion' as a form of root modality (2002: 106), which could correspond to 'obligation' in more traditional terms.

To classify root modality, Coates sees gradience as "an essential feature of Root modality. While the Epistemic modals vary only in terms of Subjectivity (...), the Root modals vary both in terms of Subjectivity and in terms of a strong-weak continuum" (1983: 21).

Root modality comprises a larger range of meanings than epistemic modality, but according to Coates (1983: 21):

> their essential unity is confirmed by the syntactic patterns associated with them, which distinguish them from their Epistemic counterparts. For example, the features animate subject, agentive verb and passive voice are all linked to Root meaning. Stress and intonation patterns also distinguish Root and Epistemic meaning.

An example of a case of clear Root meaning would be *You must go to the doctor* or *You may leave*, which show cases of obligation and permission respectively.

2.2 Modal auxiliaries

The full modals of PDE include *can, could, may, might, must, shall, should, will, would.* Nearly all of these can be used carrying either epistemic or root meaning. Coates defines the modals by their formal, syntactic characteristics, and not by their semantic characteristics, which is somewhat odd, since it is a combination of their semantics and their syntax that makes them modals. According to her the line between modals and main verbs "would be far from clear if we tried to use semantic characteristics" (1983: 4). These are the characteristics of a modal auxiliary (cf. Coates 1983: 4):

(a) Takes negation directly (*can't, mustn't*).

(b) Takes inversion without DO (*can I?, must I?*).

(c) 'Code' (*John can swim and so can Bill*).

(d) Emphasis (*Ann COULD solve the problem).*

(e) No -s form for third person singular present indicative (**cans, *musts*).

(f) No non-finite forms (**to can, *musting*).

(g) No co-occurrence (**may will*).

2.3 Historical mood and modality

There exists a controversy as to how the modals developed through the course of the history of the English language, with Lightfoot (1979) at one end, claiming that the change was one of radical re-analysis and took place over a relatively short period of time, and later linguists (e.g. Plank 1984) disagreeing with him in saying that the change was gradual, was effected

over a long period of time, and is not yet complete. Gotti *et al.* (2002) claim that modals "right from the OE period (…) have been the most frequent conveyers of permission, obligation, wish, will, and mental capacity, which can be subsumed under the general labels of deontic and dynamic modality" (2002: 27). Lightfoot's claim that the modals underwent radical re-analysis would suggest that the modals would not display any of their pre-reanalysis characteristics, but this is found with some modals, e.g. CAN. This implies that his theory is flawed.

Moreover, Lightfoot suggests that the syntactic and semantic changes were unrelated and this has been rightly criticised by other linguists. The connections between the syntactic and the semantic developments are very much suggested by the present material, in accordance with some linguists (e.g. Plank 1984; Harris 1987). Harris, for instance, says that "it seems to me (…) that both semantic and syntactic factors have played significant roles in what has been an extremely long-drawn-out and multifaced change within the language" (1987: 182). A further exploration of this topic would have been interesting. However, time limits prevent the investigation of such a topic in the present work.

2.3.1 Mood and modality in Indo-European and Germanic

To fully grasp the concept of PDE modality, one needs to look at where it all started. Modality in Indo-European and Germanic is in many ways less complicated than today. However, a brief overview of the IE verb system will give it some perspective.

The verb system is reconstructed as having had three inflectional categories – voice, mood, and aspect. According to Lass (1994), "the PIE system was probably mainly aspectual, rather than tense-based; insofar as tense proper was marked, it was subsidiary" (1994: 152). Germanic had a simpler inflection, and distinguished two tenses with which we are familiar today: present and preterite. The voices of IE were the active and the middle. The active worked 'outwards', directed at the object, while the middle voice was directed towards the subject and denoted a state. As reported in Meid (1971), the middle voice was the source of the perfect, and thus also the source of the preterite-presents, as this group of verbs developed from the Germanic perfect (1971: 7-10). Wright and Wright (1925) explain that the preterite-presents

> were originally unreduplicated perfects, which acquired a present meaning (…). In prim. Germanic a new weak preterite, an infinitive, pres. participle, and in some verbs a strong past participle, were formed. They are inflected in the present like the preterite of strong verbs, except that the second pers. singular has the same stem-vowel as the first and the third persons, and has preserved the old ending *–t* (1925: 292, §539).

According to Lehmann (1993), "The standard handbooks reconstruct the subjunctive and optative moods as well as the indicative and the imperative for the proto-language" (1993: 181). The indicative is used for factual statements, and the imperative for commands. Lehmann explains that the optative, which is the mood that conveys a sense of 'wish' or 'hope' and is lost from today's language, "was used to indicate a hope or a desire; its meaning corresponds to that of the base accompanied by 'wish'" (1993: 182-3), while the subjunctive carries a stronger meaning of 'wish' than the optative. As reported in Lehmann, the subjunctive is "comparable in meaning to both imperatives and optatives, indicating a weaker form of request than the imperative but one somewhat stronger than the optative" (1993: 183).

According to Lass "the subjunctive may have had a dual function [in Germanic]: grammatical, as a marker of certain kinds of subordinate clauses (...), and a semantic, marking unfulfilled or unreal states" (1995: 152).

Hence, it is recognized that the modal system has undergone some major changes and that there are a lot of issues to look at when studying the English modal auxiliaries.

2.3.2 Mood and modality in Old English

Modality was largely expressed through the subjunctive mood in Old English, to present something as an object of thought.
Algeo and Pyles (1982: 124) write that

> the subjunctive was used in main clauses to express wishes and commands: *God ūs helpe* '(May) God help us'; *Ne hēo hundas cēpe* 'She shall not keep dogs'. It was also used in a wide variety of subordinate clauses, including constructions in which we still use it: *swelce hē tam wǣre* 'as if he were tame'. But it was also used in many subordinate clauses where we would no longer employ it,

as for instance in indirect speech.

Epistemic modality is a problematic area in Old English because it was rarely expressed, and, so *The Cambridge History of the English Language, Volume I* states that "the pre-modals *cunnan, *motan* and *agan* show no traces of epistemic meaning in OE, while *magan, *sculan, *willan* and possibly *beon* show only marginal epistemic coloring in most instances" (1992: 197). It continues:

> Further evidence for the relative absence in OE of epistemic meanings is that even the subjunctive mood does not express doubt (low probability) in main clauses; it does so only in subordinate clauses. In addition there are very few epistemic adverbs in OE expressing probability and possibility (1992: 197).

Furthermore, the path towards reduction of the subjunctive had already begun by the Old English stage. According to Lass "Old English retains the indicative vs. subjunctive opposition, but with loss of person marking in the indicative plural, and only a sg/pl contrast (no person marking) in the subjunctive" (1994: 153). Endings were eroded throughout the following hundreds of years, which made the indicative and the subjunctive phonetically alike.

The Preterite-Presents were descendants of old Indo-European perfects. Lass explains that "since the past sense was lost in these historical perfects, new pasts had to be constructed; and since the weak conjugation even in early times was the only productive one, this is the natural source" (1994: 169).

The Germanic preterite-present verbs were *witan* 'to know', *(ge)munan* 'to mean, to believe', *durran* 'to dare', *cunnan* 'to be able, to know, to be acquainted with', *dugan* 'to avail, be of value', *þurfan* 'to use, to need', *magan* 'to be physically able, to like, to have to', *motan* 'to be able, to be allowed', *sculan* 'to owe', *agan* 'to possess, to have, to obtain', *unnan* 'to grant', *(be/ge-)nugan* 'it has been reached, therefore it is enough; one has reached allowance, therefore it is now allowed; suffice, have at one's disposal', *ogan* 'to scare', and *lais* 'I have learned'. The group still existed in Old English, but only about half of them continued as a distinct syntactic group throughout the Middle English period. According to Plank (1984: 311),

> Some of the original preterite-presents joined other, more regular inflectional classes (e.g. *witan* 'know, understand, learn, be aware of', *agan* 'possess, obtain, have to pay, have to do', partly also **dugan* 'avail, be of value, be capable of'), others simply disappeared from the language altogether (e.g. *(be/ge-)nugan* 'suffice, have at one's disposal', *unnan* 'grant, allow, desire', *þurfan* 'need, be required, be under obligation

to, have occasion to', *(ge-)munan* 'remember, think about, consider, intend'.

Only the OE preterite-presents which are considered pre-modals are discussed here, and the group of pre-modals in Old English comprised (cf. *The Cambridge History of English*) *cunnan* 'know how to, have power to, be able, can', **durran* 'dare', *magan* 'be strong, sufficient, in good health, be able to', **motan* 'be allowed to, be obliged to', **sculan* 'owe, be necessary', *willan* 'will, wish, desire' (1992: 193).

Modals in PDE are defined by certain syntactic criteria that distinguish them from main verbs and other auxiliaries. However, these are not yet as characteristic in Old English. Goossens (1987a) explains that "*do*-support is a later development in English: and, though the combination with infinitives is not infrequent, it is not a generalized feature" (1987: 113).

The preterite-presents are a group that comprises more members than the PDE modal auxiliary group, and one of the modern modals, *WILL*, was not a member of this group at all. Additionally, as can be seen in the overview of pre-modals, the semantics of the Old English modals differ from their modern English descendants.

According to *The Cambridge History of the English Language Vol I* the pre-modals were a group of verbs that "for the most part behaved like main verbs" (1992: 186). However, it has been argued by Traugott in the same volume that one may consider some of the pre-modals (**motan* and **sculan*) as auxiliaries already in Old English because "they never appear in non-finite forms" (1992: 194).

The semantics of the preterite-presents, however, is certainly not insignificant. First, it can be observed that the pre-modals have undergone a semantic development that makes the class in which they belong more coherent. Second, these semantic changes are closely related to the establishment of the modal auxiliary class, and will thus be further explored.

2.3.3 Mood and modality in Middle English

According to Lightfoot (1979) a radical re-structuring of the pre-modals into the category 'modal' took place before, during, and after Middle English, and the results are already starting to show in the ME period. He claims that the story has two stages to it: a set of early changes "which set the scene for the re-structuring" (1979: 101), and the re-structuring that

eroded all doubt as to whether or not this now was a separate class of verbs: by the time of Middle English the early changes had already been carried out (cf. Lightfoot), which entailed that the pre-modals no longer could take direct objects (except for *can*); there was no 3rd person singular *–eþ* (modern *–s*) ending; there was a loss of the non-pre-modals from the preterite-present class; preterites could have present meaning; the pre-modals never took the *to*-infinitive, although this was introduced to main verbs, and there was a "special marking of epistemic pre-modals to avoid otherwise expected SVOM or *it* M[NP…]s structures" (1979: 109). Lightfoot estimates that "these changes seem to have taken effect by the end of the fifteenth century" (1979: 109).

Mood still exists in Middle English, as today, but this period reduces its use due to several factors, including the loss of inflectional differences between the indicative and the subjunctive and the extended use of the modal auxiliaries as a way of expressing modality, probably as a result of the loss of inflectional endings, or of reciprocal influence. Pyles and Algeo (1982) say that the reduction of forms in English verbs is "a result of the merging of unstressed vowels into single sounds" (1982: 153). This meant that "In the present tense only the second- and the third-person singular were distinctive (...). In the past tense of strong verbs only the first and third person were distinctive, and of the weak verbs only the second-person singular", as stated in *the Cambridge History of English, Volume II* (1992: 247).

Furthermore, it states that "The early use of the periphrastic construction may be due to a desire to be more emphatic and possibly to be more specific than was possible with the subjunctive form" (1992: 262). There are other factors to consider as well. The fact that the semantics of the modal auxiliaries changed may have been a *reason* for their increased use, or the change may be a *result* of their new popularity. A possible genre difference is another argument to be considered. The texts we have access to from Old English and Middle English may vary in genre, there might have been more types of texts produced in the ME period than in OE, and colloquial language may have been modalized more than written language.

2.3.4 Mood and modality in Early Modern English

The re-structuring of the group of pre-modals Lightfoot speaks of was effected from late Old English and Middle English to Early Modern English. It thus seems that the changes were concluded by this period. The developments entailed that non-finite constructions were no

longer possible (infinitival constructions, *-ing* and *–en* affixes); the rules for negative placement changed with main verbs, but this change did not affect the modals (*Sarah sings not* was no longer correct, instead one would have to say *Sarah does not sing*); in questions, normal inversion was no longer possible with main verbs, and thus, e.g. *sings Sarah?* would be *does Sarah sing?*, whereas modals still had the possibility of being inverted; quasi-modals (*be going to, be able* to, etc.) came into the language (cf. Lightfoot).

The result of all these changes was the new class 'modal auxiliaries'. Warner (1993) suggests that "by Chaucer's time [Late ME] the modal group shows a range of uses which are substantially like those of the modern modals, alongside their other uses" (1993: 180).

However, although the modals were practically the same as we find them today, there has been some development from the Early Modern English period to today. Ehrmann (1966) dates the final establishment of the modals to Shakespeare's time (1966: 97).
According to Warner, however, "modals continue to lose past-referring uses of their preterite forms, so that the tense-relationship becomes more opaque" (1993: 181). Moreover, he states that "there is a continued reduction in the relevance of subject-oriented uses" (1993: 181).

According to Warner (1993: 181)

> there are also some more systematic differences between early Modern English and Present-day English, which reflect a continued semantic focussing of modality. Firstly, modals continue to lose past-referring uses of their preterite forms, so that the tense-relationship becomes more opaque. Secondly, there is a continued reduction in the relevance of subject-oriented uses. *Will* loses the sense 'desire' (…) and volitional instances decline in frequency. *May* finally loses the potentially subject-oriented sense 'be able' to *can* in the course of Modern English (*OED may*, v¹. 2). *Can* itself loses the sense 'know' and the object construction, but also senses with the infinitive in which 'know how' is prominent and the subject is selected (*OED can*, v¹. 3, V[isser] §1622).

2.4 Tense

Smith (1981) explains that "one part of processing an utterance involves identifying the time – past, present or future – at which the event or state described is intended by the speaker to be located" (1981: 253).

Comrie (1985) defines tense as "the grammaticalisation of location in time" (1985: 1). This entails morphology being used to express where on a time-line an action/state is located. At

all stages of English, there has been a simple two-way distinction in tense: past and non-past (present and future). It seems natural that such a two-way system with no (morphologically expressed) future tense should develop some kind of future marker.

In this context it is worth observing that, according to Smith, "It is well-known (…) that the relation of time to tense is far from being one-to-one" (1981: 253). This is particularly true when it comes to modal auxiliaries which, as already established, do not convey past time by the preterite forms. According to Coates (1983) "tense and modality are strongly linked" (1983: 233). She explains that futurity never can be statements, and that it rather is expressed through prediction. Moreover, she says that "the relationship between futurity and modality is often asserted in the context of the 'future tense' modals, WILL and SHALL" (1983: 233). In OE, **sculan* meant 'to be obliged to' and *willan* had the meaning of 'to wish, will, desire'.

Mitchell's (1985) examples from OE "suggest that **sculan* and *willan* at times are pretty close to expressing futurity with no undertone of compulsion or volition" (1985: 426). According to Visser (1969) "'He sceal specan' was (…) roughly equivalent to Modern English 'he must, he has to, he ought to speak'" (1969: 1581) but this changed in the course of the history of the English language. He further points out that "*present* obligation or volition automatically implies *future* action" (1969: 1582). He also suggests that the same can be observed with *will* with an infinitive (ibid.):

> *Will* originally expressed nothing but a present determination to perform the action denoted by the infinitive, but (…) subsequently, in many contexts, the notion of futurity gradually displaced, partly or wholly, that of determination.

The Cambridge History of the English Language, Volume II (1992) states that "already in Old English **sculan/willan* are used with predictive meaning, but in these cases **sculan* usually expresses obligation or necessity as well, and *willan* volition (1992: 264). Warner (1993) dates the use of *shal* and *wil* for marking futurity to early Middle English.

2.5 Semantic and syntactic change

Traugott and Dasher (2002: xi)

> See semantic change (change in code) as arising out of the pragmatic uses to which speakers or writers and addressees or readers put language, and most especially out of the preferred strategies that speakers/writers use in communicating with addressees.

Syntactic change regards changes in the morphology and syntax of a language. Both syntactic and semantic change have been of importance to the development of the modal auxiliaries. Traugott and Dasher explain that "in semantic change, two major mechanisms are usually recognized, metaphor and metonymy" (2002: 27). According to Bybee *et al.* 'ability' was the first type of modality found with the modals, developing a root possibility meaning, which, in turn, developed both a 'permission' and an 'epistemic possibility' meaning.

According to Warner (1993) a couple of features in the semantic development are interesting:

> Firstly there is the further development of (or further evidence for) the expression of epistemic and subjective deontic modality, and of futurity and hypotheticalness. Secondly the group becomes more coherent semantically as semantic changes and lexical losses increase the correlation between modal uses and preterite-present morphology (1993: 174).

Sweetser (1990) argues that "there is strong historical, sociolinguistic, and psycholinguistic evidence for viewing the epistemic use of modals as an extension of a more basic root meaning" (1990: 49-50). She thus suggests that epistemic modality has come about as a result of metaphorical extension of root modality, and substantiates this claim in saying that "we generally use the language of the external world to apply to the internal mental world, which is metaphorically structured as parallel to that external world" (1990: 50). According to Bybee *et al.* (1994)

> a shift from agent-oriented [root] to epistemic meaning involves a change in scope. The agent-oriented modal is part of the propositional content of the clause and serves to relate the agent to the main predicate. The epistemic modal, on the other hand, is external to the propositional content of the clause and has the whole proposition in its scope (1994: 198-199).

As reported in Bybee *et al.* (1994), "Horn 1972, Steele 1975, and Coates 1983 all point out that the force of the epistemic sense expressed by a modal is directly related to the force of the agent-oriented sense from which it derives" (1994: 195).

The syntactic development of the English modals is one of reanalysis according to Hopper and Traugott (2003). The development of the modals was

> originally conceived as a prime example of syntactic change, [but] it is also an instance of grammaticalization. It concerns change in the status of lexical verbs such as *may, can, must* (…) such that they become auxiliaries, in other words, recategorization (2003: 55).

Syntactically, the pre-modals are in Old English by many considered to be main verbs. However, Warner claims that "they had at least some 'notional' points of contact with their modern congeners, if arguably, often a contextual one" (1993: 92). According to Lehmann (1985) "grammaticalization is a process which turns lexemes into grammatical formatives and makes grammatical formatives still more grammatical" (1985: 303).

The emergence of a modal group is considered by Lightfoot (1979), as mentioned above, a case of syntactic change only, whereas others, e.g. Plank (1984) regard it as being a development that was affected by both syntax and semantics. He claims that "it is misleading to imply that this development, allegedly affecting all premodals indiscriminately, took place regardless of the meanings with which they were used" (1984: 310), and continues "I doubt that the loss of premodal-object constructions [one of the syntactic changes] can be made sense of when seen in isolation from the semantic development of the (pre-)modals" (1984: 311).

3. MATERIAL AND METHOD

The material used for the present thesis is a corpus comprising Old English, Middle English and Early Modern English texts. This chapter presents corpora as a linguistic method; the Helsinki Corpus of English Texts; the data extracted from the corpus; and the genres with which this thesis is concerned. Corpora are helpful tools in linguistic research, but one needs to exhibit caution as well. The advantages and disadvantages of this method are discussed, and limitations to the present study are presented.

3.1 Corpora

According to Sinclair (1999), "A corpus is a collection of samples of a language which are selected according to explicit criteria, normally of a sociolinguistic nature, and the size of samples in current practice is large enough to include whole texts of book-length or larger" (1999: 1).

Computerized corpora thus allow us to easily search large collections of text, which can be useful in understanding language. The corpus holds real language, as opposed to other sources which use made-up examples. This means that we can see the language **as it really is**, and not how 'it should be'. Language is not something that is constant and independent; it is a product of the human mind and usage. Therefore, language changes over time and corpora are a good way of tracking these changes without the researcher having prior knowledge of all languages and states of a language, which is impossible.

Michael Barlow (1996) states that "the use of corpus data can be seen either as supplementary to data based on intuitions, or, as I [Barlow] would argue, as a fundamental part of theory construction" (1996: 2).

Accordingly, it is understood that corpora is a preferred methodology with many linguists today, and Johansson (2004: 60) explains why in saying that

> In the course of the last couple of decades there has been a rapidly increasing interest in corpus studies in linguistics, i.e. studies linked to text corpora. This is partly connected with the growing preoccupation among language researchers with the possibilities of analysing large amounts of text using computers.

Sinclair continues this line of praise writing that "with a computer-held corpus, we get access to information of quantity *and quality* that we have never had before" (1999: 1).

However, although using corpora is an extremely useful method in researching language, one also needs to exhibit caution in using them.
First, it is important to be aware of the fact that corpora may contain errors, tagging might be erroneous, there might be typing mistakes made, etc. Second, it is tempting to stay in the quantitative approach when enjoying the easy access to large amounts of text in using a computerized corpus. However, in order to explain why we find these phenomena, we need to look at the text itself, and not only at figures and numbers. Third, however wonderful and helpful a corpus may be, it can also limit the scope of an investigation because it cannot do certain searches or investigations, or its selection of texts is limited and/or haphazard. It is important not to rely on the corpus to such an extent that one exhausts only the opportunity of using this tool, disregarding other methods available to study the language.

Claridge (2008) explains that diachronic corpora, or historical corpora, are "intentionally created to represent and investigate past stages of a language and/or to study language change" (2008: 242). The compilation of historical texts into different corpora is extremely helpful in investigating earlier stages of a language, but still some caution must be exercised when using a diachronic corpus. As language may vary, and always does, among speakers of a language, a corpus should include texts covering all domains of a society. As Claridge points out, "this is problematic enough for modern corpora, but the problems for historical corpora are multiplied" (2008: 246-7). There may be only a few texts included from the older stages of English, and one might thus not choose freely. These texts, in particular the oldest, only represent a small percentage of the population's use of the language – that of royalty and clergy since the vast majority of the population was illiterate. Additionally, the texts were mostly written by adult men, and regional variation is in many instances impossible to obtain. The texts are often anonymous, and the genres represented are few. What is more, there are no possibilities of looking at the spoken language of earlier stages of the language. As a result of all these deficiencies, Claridge acknowledges that "historical corpora can never even remotely capture the full variety of language" (2008: 247).

Oher problems also arise when using a diachronic corpus. One needs to look at the context to a larger extent than one does when investigating a corpus containing present-day language

because, as Rissanen (2008) explains , "introspection and native-speaker competence cannot be relied on in the study of the language of previous centuries and millennia" (2008: 53).

The Helsinki Corpus used in the present study is not tagged, and one needs to keep in mind that the language prior to standardization may contain several different forms of a word, and, for instance, the Middle English form *most(e)* may represent both the modal auxiliary 'must' and the adjective 'most'. Thus one should display caution when searching and using a corpus.

3.1.1 The Helsinki Corpus

In the present study I have relied on material taken from the *Helsinki Corpus of English Texts.* This is a corpus with both a diachronic and a dialectal part, with the diachronic part being relevant for answering the questions posed in this thesis.

According to Merja Kytö (1996), one of the collectors and makers of the Helsinki Corpus, it "is a computerized collection of extracts of continuous text" (1996: 2). Further the diachronic part of the corpus covers "the period from c. 750 to c. 1700" (ibid.).

Although the corpus is a rather small corpus compared to other corpora, with a total of 1,572,800 words, suffice it to say that the historic content is of extreme interest. Moreover, it has been considered large enough for the current purpose.

Kytö points out that (1996: 7)

> The diachronic part of the Helsinki Corpus includes a basic selection of texts compiled from the Old, Middle and Early Modern (British) English periods (...). Except for shorter texts given in toto, the length of the extracts varies from 2,000 to 10,000 words. At present the Old English section of the Corpus contains 413,300 words, the Middle English section 608,600 words and the British English section 551,000 words, a total of 1,572,800 words.

As preterite-presents, pre-modals and modal auxiliaries are, and always have been, frequently used words throughout the history of the English language, it is possible to obtain a picture of their semantics and syntax from a corpus of this size. However, all the factors concerning a historical corpus taken into consideration, one cannot aim to end up with absolute empirical truths. Nevertheless, as these texts are all we have to work with in this corpus, they should allow a historical linguist to draw at least general conclusions.

3.2 The data

The Helsinki Corpus comprises several different genres, and in order to establish the modals' development, two very different genres were chosen to work with: law texts and historical texts.In these texts, the modals were found in 198 instances.

The process of finding these modals is somewhat intricate. There is no possibility of performing a lemma search in the Helsinki Corpus (a lemma search allows you to search for a word in all its possible forms), nor is the corpus tagged. This means that one needs to manually search for all possible forms of a word and make sure that all of the instances are in fact modals. For instance the forms <most>, <moste> can be both the modal MUST and the adjective *most*, and several of the instances of <cunne(n)> were forms of OE *cyn, cynd* because [y] was not unrounded in all dialects in Middle English. Particularly the West Midlands kept it round, and represented it with <u>, <ui> or <uy> orthographically.

The forms of MUST searched for in the corpus were *motan, moten, moton, mote, mot, most, mosten, mostan, moston, must, moste, muste*. However, not all forms were represented in the material. The forms found were *moton, moste, moston, motan, mosten, mot, most, must, muste*.

The forms of CAN searched for in the corpus were *cunnian, cunnan, cunnen, cunnon, can, canne, canst, cuþ, cuđ, cuđen, cuđon, cuđan, cuþen, cuþon, cuþan, cann, kan, kann, kunnian, kunnan, kunnen, kunnon, kanne, kanst, kuþ, kuđ, kuþen, kuþon, kuþan, kuđen, kuđon, kuđan, cannest, kannest, cunnest, kunnest, could, cuđe, cuþe, cuthe, couthe, coud, coude, cud.* The forms that were actually present in the material were *cuđe, cuþon, cunnan, cunnian, cuthe, cunne, coude, cuđen, could, can, cuþe, canne*.

All in all there were 95 instances of MUST and 103 instances of CAN in the Helsinki Corpus. These were grouped according to which genre they belonged and which year they were written. The OE material is grouped into OE 1 (-850), OE 2 (850-950), OE 3 (950-1050), and OE 4 (1050-1150). However, as there were no instances from the earliest OE, they were 'renamed' for the purpose of the present study, and thus OE 1 disappeared, OE 2 became OE 1 and the rest followed accordingly. There are four different periods within the ME part of the corpus: ME 1 (1150-1250), ME 2 (1250-1350), ME 3 (1350-1420), and ME 4 (1420-1500). As for EmodE, there are three groups: EmodE 1 (1500-1570), EmodE 2 (1570-1640), and EmodE 3 (1640-1710).

There was a desire to have a selection of random 200 examples from each modal, but this proved impossible. There were not enough instances in the corpus to meet this number and the modals were more frequently represented in some periods than in others. This resulted in a 'take what you can get' search, and all the instances that included one of the modals for the present thesis were included for analysis.

3.3 Limitations

There are several limitations to the present study that need to be addressed. To begin with, one cannot intend to arrive at any absolute conclusions from the numbers of instances found in the corpus. In some of the periods there was a complete absence of instances, which compromises the results. The earliest OE (750-850) is not represented at all, and several other periods, in particular in Middle English, which is of marked interest, have a very low frequency of the modals investigated. Early Middle English is considered the period where most of the changes took place, and it would have been of great interest to look at more instances from this period. However, the time and scope restrictions of the present thesis could not allow such an expansion of the data. A helpful tool in this respect would have been the LAEME (Linguistic Atlas of Early Middle English), which comprises 650 000 words. This corpus is tagged, which makes the investigation process far less complicated. However, as this corpus is not divided into genres, it would have been somewhat inappropriate for the present thesis. Using LAEME was considered for the purpose of establishing a general picture of the modal story of Early Middle English, but time constraints were a hindrance.

Law texts have an overall low frequency of modals, which might have been expected. Furthermore, the uncertainty as to how the genre of law texts would behave in older times can be viewed as a disadvantage, in the sense that the material will not function for its purpose if the genre turns out to be less conservative than anticipated. However, one needs to start with a working hypothesis which is either corroborated or rejected by the data.

Additionally, it should be noted that some of the instances may have displayed older language than the period to which these particular manuscripts were assigned. A manuscript may have been dated as written in OE 3, but the original may have been from OE 2. The decision was made, however, to follow the dating of the manuscripts because one cannot protect oneself against changes and corrections made by the writer.

3.4 Genres

3.4.1 Legal texts

Crystal and Davy (1969) characterize legal language as "a form of language which is about as far removed as possible from informal spontaneous conversation" (1969: 194).

According to Jackson (1995), there are three characteristic features of the language of legal documents:

> - Its exceptionally high degree of *formality*;
>
> - Its *professionally exclusive* – some would say exclusionary – nature. It is the language of experts, i.e. of a restricted professional group;
>
> - Its *'archival'* nature insofar as much legal writing consists of normative information relating to rights and obligations which are officially recorded in case it should ever need to be consulted and used in the future (1995: 12).

This description of the genre holds for legal texts from all of the stages of English. Although a legal text will have seen some escalation in the degree of formality, it was as official a document in year 800 as in year 2010. From being written by royalty and the clergy, to being written by lawyers, judges and politicians, there will have been some concomitant changes in its nature. However, today's legal language is a descendant of the earlier language, and will unavoidably share some characteristics with its predecessor. Nevertheless, it should be taken into consideration that the laws of the time of the Old English stage of the language mainly were utterances that were written down: Many of the laws start with a speech-act, such as the phrase 'I/we say that…', and according to Schwyter (1996), "Anglo-Saxon law-making was, as a rule, an oral process" (1996: 27). In this sense, one might expect a large degree of informality in these texts. Nonetheless, they were written in a fairly similar context as today – aiming to direct the people of a society towards the aspired behavior using sanctions and rewards.

As regards modality in legal language, Williams (2005: 84) explains that

> the content of prescriptive legal texts derives from the real world of facts but is projected towards the ideal world of how things ought to be. Belonging as they do to the sphere of deontic modality, the temporal dimension of such texts would seem to partake of the present and of the future simultaneously.

When legal texts are examined by Williams, it is found that neither MUST nor CAN is very frequent in this genre. As reported in the same study (2005: 123):

> it is interesting to note that, even though *must* is the modal auxiliary in English most strongly associated with obligation in general usage, and obligation is a central feature of legal discourse, its presence in prescriptive texts taken as a whole was and still is by no means common, constituting little more than three per cent of all finite verbal constructions today.

It seems as if MUST is held back on in order to keep its strength as a modal denoting obligation for those cases where the meaning of obligation is very strong. When MUST is used in prescriptive legal texts, there is rarely any other meaning understood than the meaning of obligation understood. This is of substantial importance for the current study. If there seldom are uses of epistemic MUST in legal language, is this because of the register, i.e. the conservativeness of these texts, or is it simply because epistemicity is not needed in this context? These are relevant questions, and an answer is difficult to find. For the purpose of the current thesis, the assumption must be made that some aspects of conservativeness and formality do play a part.

According to Williams, *can* is "not commonly used in affirmative statements in prescriptive legal discourse" (2005: 138), but can be found in rare instances. However, in other parts of legal language, *can* is quite common, in particular in explanations of a law (i.e. prescriptive legal document). Crystal and Davy (1969) observe the language and style of modern English legal documents, and at least one observation may be compared and contrasted to the language of the Anglo-Saxon laws, as done by Schwyter. Crystal and Davy explain that (1969: 201):

> legal sentences are usually self-contained units which convey all the sense that has to be conveyed at any particular point and do not need to be linked closely either to what follows or to what has gone before. It seems that many types of discourse – especially conversation – prefer to convey connected information in a series of short sentences which need linking devices to show their continuity, while legal English moves in the opposite direction by putting all such sequences into the form of very complex sentences capable of standing alone.

This makes the legal genre an appropriate contrast to the historical genre. However, it should be kept in mind that Anglo-Saxon laws had a simpler language than we find in today's laws, and so Schwyter states that self-sufficient sentences were accomplished through "the brief,

laconic, and general nature of the provisions" (1996: 54).

3.4.2 Historical texts

Annals and chronicles are what we are dealing with in the material. These are both somewhat colloquially written, the annal more so than the chronicle, which sometimes was written more poetically. According to *OED Online* an annal is "the historical record of the events of each year". Older historical writings have a colloquial, paratactic style, which is a spoken-like feature. The sentences are short, and the writer seems to have sought to inform rather than to use fancy and elaborate language.

C.V. Wedgwood explains in the foreword to *English Historians. Selected Passages* (1957) that the reader of texts in this genre

> wants the historian to tell him these things [the historical events] clearly, persuasively, and without too much beating about the bush, and he will be pleased if he is carried along by a good style. But the story, or the argument, is the thing: skill of structure and grace of language are not, in the first place, what he is looking for.

This makes this genre close to spoken language, and it seems as if this would be the most colloquial type of language one would be able to find in Old English texts in the present corpus.

4. PREFACE TO ANALYSIS

In this section, an overview of previous studies of modals is given and briefly discussed, with the main focus on the two modals with which the present thesis concerns itself: CAN and MUST. Some concepts regarding change in meaning are presented, and **central versus peripheral meaning** as a means of uncovering a 'track' by which the modals have gone is introduced.

4.1 General

Earlier diachronic studies of the modal auxiliaries (or preterite-presents, or pre-modals) have disagreed on when to date the semantic developments. Lightfoot (1979) suggests that these developments took place between the OE and ME period. Traugott and Dasher (2002) argue that MUST got its 'obligation' sense around 1000 AD, and that it can be understood with an epistemic meaning from around 1300 AD. Plank (1984) states that MUST lost its 'permission' and 'wish' senses in "later ME/early ModE" (1984: 344). Van Herreweghe (2000) concludes that the 'obligation' sense was peripherally present in "(late?) Old English" (2000: 237).

As for CAN, Warner (1993) characterizes the semantic development as "difficult to date since the original sense 'passes imperceptibly into the current sense' (*OED Can*, v¹. 3-4)" (1993: 177). According to *OED Online* the 'ability' sense is found around 1300, but Warner is open to the possibility that it actually was "already apparent in Old English" (1993: 177). The expansion to the epistemic meaning is even fuzzier. Visser (1969) includes an example from c1250, but according to Warner it is "very infrequent" before Modern English (1993: 177).

This shows that dating the semantic changes of modal verbs is difficult, and, as mentioned above, not at all agreed on. The present thesis seeks to find an answer to the partly unanswered questions regarding the dating of this change. When did the semantics and functions of CAN change from having full verb properties to becoming a modal? When did MUST lose its 'permission' sense? When did epistemic modality come into the picture? How did these changes come about?

Traugott (1989: 31) argues that

> the process of semantic change outlined for the semantics of grammaticalization belongs to a larger set of crosslinguistic processes of semantic change that are in general quite regular.

She continues by suggesting that "there are three closely-related tendencies" (1989: 34). The first tendency is that "meanings based in the external described situation > meanings based in the internal (evaluative/perceptual/cognitive) described situation" (1989: 34). The second tendency is that "meanings based in the external or internal described situation > meanings based in the textual and metalinguistic situation" (1989: 35). The third tendency is that "meanings tend to become increasingly based in the speaker's subjective belief state/attitude toward the proposition" (1989: 35). The two modals MUST and CAN have at some point both undergone all these changes. The first tendency can for instance be illustrated by **motan* and its Germanic sense of 'measure', which shifted to OE 'permission', demonstrating the shift from a meaning based in the externally described situation to a more internally focused situation. The second tendency is seen in the modalization of the full verb *cunnan* to the modal verb *can*. Traugott's third tendency is that which is seen when epistemic modality develops.

According to Bybee *et al.* (1994: 196)

> with regard to changes in modal meanings, a controversy has arisen in the literature over whether the mechanism of semantic change in grammaticization is metaphorical extension or change by conventionalization of implicature.

This means that a meaning can be implied by another meaning, and thus this implied meaning can be referred to the word and a new sense of the word has developed. Carey (1990: 373) explains it as

> When semantic change arises from the conventionalization of invited inferences, some aspects of the context in which the expression was used with its old meaning becomes indexed and over time becomes part of the new meaning of the expression itself.[1]

[1] Quote taken from Nicolle, Steve. 1998. "A Relevance Theory Perspective on Grammaticalization", in: *Cognitive Linguistics 9-1*. Berlin: Mouton de Gruyter, pp. 1-35

Sweetser (1990) argues that the mechanism is metaphorical extension, whereas Bybee *et al.* (1994) suggest that conventionalization of implicature is the force behind semantic changes in most parts of the modal system.

4.1 Central and peripheral meaning

A method used by both Goossens (1987b) and Van Herreweghe (2000) to establish semantic meaning and change with modals "is to try to distinguish between central and peripheral meanings" (1987: 216). According to Goossens (1987: 216)

> comparing an earlier stage of the modals with a later stage, one will find (…) that what used to be a peripheral meaning may become central. The corollary will be that the former central meaning has receded to become peripheral, or, over an extensive period of time, has been lost.

The concept of central versus peripheral meaning will be applied to the present study. The central meaning of MUST has changed throughout the history of English, with 'permission' serving as its central meaning in OE and with 'obligation' taking over later. The present thesis seeks to establish when MUST acquired a peripheral meaning of 'obligation' and when this developed into being a central meaning, and how this happened. The epistemic sense of MUST is also assumed to have started as a peripheral meaning, but here, it has developed into being one of several central meanings instead of taking over the central position.

The concept of central and peripheral meaning can be applied to the development of CAN as well. According to most works on the history of modal verbs, the full verb sense of CAN 'to know' is considered its central meaning in OE. The reported changes that took place through the course of ME and which gave CAN the new meaning of 'ability' suggest that this sense could have been peripherally present at an earlier point. Similarly to the case with MUST, the work in hand seeks to learn when 'ability' entered as a peripheral meaning, and how this happened.

Looking at central and peripheral meanings can also give us the connection between one central meaning and another. There might have been peripheral meanings that never became central, but served as a steppingstone between two senses. Goossens suggests that

> Given the fact that language, to speak with the Saussurean phrase, is a system 'où tout se tient', one would expect peripheral meanings to be cognitively linked to more central ones. Newly arising links can be said to be *paths* along which the development of the modals took/is taking place (1987b: 216).

5. MUST

In section 5.1 the semantics of MUST are thoroughly explored through previous work and studies of the modals. The previous works, containing methods on which the present thesis is based, are presented in 5.2. The analysis of the findings is found in section 5.3. Tables of the findings are given, with following discussions. Several examples of the different meanings are introduced, along with discussions of unclear examples. Examples have been used to substantiate the claims that are brought forward, and to present the reader with a picture of how the conclusions were made.

5.1 Semantics

The original Old English meaning of MUST was, according to Mitchell and Robinson (2007: 114), that of 'to be allowed to, may'. When the modal developed its sense of 'obligation' is not agreed on. Additionally, Traugott (1972) elaborates that "in many reports of permission, *mot-* approaches the neutral meaning 'be able' rather than 'be permitted' " (1972: 72). Moreover, Warner (1993) assigns it a meaning of dynamic and deontic necessity. He further explains that "this only becomes common in late Old English; indeed it has been claimed that this sense only develops round about the year one thousand (…). But it develops rapidly, and is the predominant sense by the mid thirteenth century" (1993: 160).

The semantic development of **motan* is connected to the semantic development of *magan*. As **motan* lost the 'permission' sense, *magan* took over as the verb that conveyed this meaning. The connections between the modals in their development will be treated towards the end of the present thesis.

In the Middle English period, MUST still carried the possibility and permission meanings, but these uses were not as frequent as in Old English. Here the 'obligation' sense is gaining ground, and still more meanings are surfacing. As stated in Warner (1993), "*mot* gives evidence of a fuller range of senses, both epistemic and subjective deontic. By the fourteenth century epistemic uses are well attested: there are a good many in Chaucer's translation of Boethius (mainly in collocation with *nedes* or a similar adverbial)" (1993: 174). It is also at this stage of the language that the form *must* takes over. As this could have been the subjunctive form of *mot-* (*moste*), it can provide us with a possible explanation as to how the epistemic sense came into the language.

By the time of Early Modern English, we find MUST as it is understood today. According to Coates (1983) "MUST has two main meanings, a Root meaning (obligation/necessity) and an Epistemic meaning (logical necessity/confident inference)" (1983: 31).

5.2 Previous work

According to Standop, as presented in Visser (1969), MUST "goes back to the Indo-European root **med-*, and suggests that something like 'I have got it measured (meted) out to me'(…) may have been the basic or underlying sense" (1969: 1793-1794). **motan* was related to Gothic *gamot* and as stated in Visser,

> it is generally supposed that the original meaning of Old English *motan* was 'to find (have) room', and that further, already at a very early period, the sense 'to be allowed' quite naturally developed from it (1969: 1791).

He continues:

> It is in fact not unreasonable to suppose that the 'meting out' of a favour, a grant, an opportunity, a possibility to perform an act, came – under certain conditions – to be apprehended as the imposing of a kind of task (1969: 1797).

Goossens (1987b) performed an investigation of 100 instances of MUST in Old English prose in the *Toronto Concordance on Old English* where he looked at the meaning of the preterite-present. It is quite clear from this investigation that the core meaning of MUST in OE was 'permission'. 48 of his 100 instances had a clear 'permission' sense, and further, 38 instances were ambiguous between 'permission' and 'obligation', 'ability', 'contingency' or 'wish'. He looks at the tracks connecting the senses carried by the modal, and he makes the point that "conceptually, an obligation, like a permission involves some external authority or circumstance, only this authority or circumstance is not viewed as 'enabling', but as compelling" (1987b: 232). Thus, there is a clear link between the two meanings.

Additionally, he found a high number of instances of 'permission' in negated sentences, which is another link between the two meanings in the sense that a negative 'permission' is very close to 'obligation'. Lastly, he suggests that other verbs could have been a factor in the shift from 'permission' to 'obligation', because the modal collocated with verbs that had a sense of 'permission' themselves, and thus "weakened" the semantics of the modal. Goossens lists these verbs as "verbs of begging/asking, verbs of thanking, verbs of granting" (1987b:

230), and explains that "such instances demonstrate a semantic weakening owing to the (syntactic) embedding after a verb of a particular (semantic) class" (1987b: 230).

Van Herreweghe (2001) looked at 218 instances of MUST in *The Anglo-Saxon Poetic Records* and found that 147 of these conveyed a meaning of 'permission'. Additionally, this investigation shows that an 'ability' reading of MUST is quite common in poetry, with 53 of the instances carrying this sense.

These results are to some extent not surprising. The 'permission' sense is reported by all linguistic works on the subject to be the core meaning of MUST in Old English. However, one would assume that the 'obligation' sense, which eventually takes over as the central modal meaning, would be more common. As historical texts are assumed to be closer to spoken language than the genre investigated by Van Herreweghe it can be hypothesized that more occurrences of this sense may be found here. As stated in Van Herreweghe:

> (...) we cannot of course rule out the influence of the type of corpus: a homiletic corpus can be expected to be slightly closer to the developments in the spoken language than an essentially conservative poetic one (2001: 221).

The reasons for the change from 'permission' to 'obligation' have been discussed in Goossens (1987b). According to Goossens

> an obligation, like a permission, involves some external authority or circumstance, only this authority or circumstance is not viewed as 'enabling', but as compelling. Of crucial importance here is the appreciation of the state of affairs with which **motan* combines. As long as the state of affairs can be assumed to be appreciated as welcome, desirable, etc. by the (typically animate) entity that faces the authority involved, we get a permission reading (…). If, however, this appreciation is to be thought of as negative, i.e. as unwelcome, undesirable or difficult, this naturally gives rise to an obligational reading (1987: 232).

Another factor presented here is the use of negated MUST. He explains that "a denied permission amounts to an obligation-not-to: under negation the distinction between permission and obligation is considerably diminished" (1987: 232-233). There is also a suggested path through other peripheral senses.

The prose material investigated by Goossens is closer to the material used for the investigation in the present study than Van Herrweghe's poetic records. These would perhaps be similar to some of the more poetic samples of historical texts. However, neither Goossens nor Van Herreweghe look at the legal genre, and differences between two genres have not been explored. Additionally, this thesis goes from Old English to Early Modern English, and therefore the developments suggested in these two studies might be even clearer in the present material.

MUST has followed a path from Indo-European 'I have got it measured out to me' to 'allowance' to Old English 'permission' to 'obligation' and further to 'logical necessity'. The discussion of how the epistemic sense came about is one treated in numerous studies. As mentioned above, Sweetser (1990) views the grammaticalization process of modals as one of metaphorization. She proposes that

> root-modal meanings are extended to the epistemic domain precisely because we generally use the language of the external world to apply to the internal world, which is metaphorically structured as parallel to that external world (1990: 50).

According to her, "epistemic modality binds the speaker to believe the proposition, while deontic [Root] modality binds the subject to do the action expressed in the proposition" (1990:57). She specifies:

> I propose that the root-modal meanings can be extended metaphorically from the "real" (sociophysical) world to the epistemic world. In the real world, the *must* in a sentence such as "John must go to all the department parties" is taken as indicating a *real world force* imposed by the speaker (and/or by some other agent) which compels the *subject* of the sentence (or someone else) to *do the action* (or bring about its doing) expressed in the sentence. In the epistemic world the same sentence could be read as meaning "I must conclude that it is John's habit to go to the department parties (because I see his name on the sign-up sheet every time, and he's always out on those nights)". Here *must* is taken as indicating an *epistemic force* applied by some *body of premises* (the only thing that can apply to epistemic force), which compels the *speaker* (or people in general) to reach the *conclusion* embodied in the sentence. This epistemic force is the counterpart, in the epistemic domain, of a forceful obligation in the sociophysical domain. The polysemy between root and epistemic senses is thus seen (…) as the conventionalization, for this group of lexical items, of a metaphorical mapping between domains (1990: 64).

While Sweetser applies metaphorization as the source of epistemic meaning with all modals, Bybee *et al.* (1994) are of a different opinion. However, they rightly conclude in agreement with Sweetser that in the case of MUST "the conventionalization of implicature cannot be the source for the epistemic sense" (1994: 201), and argue that because

> the epistemic use of *must* arises in contexts with aspectual interpretations distinct from the obligation uses, it appears that metaphor may be at work in this change (1994: 201).

5.3 Presentation and discussion of findings

In classifying the examples, the categories found in Goossens (1987b: 223) were loosely followed:

A Permission

A/B Permission/Obligation

B Obligation

A/C Permission/Ability

(A/B)/D (Permission/Obligation) Contingency

A/E Permission/Wish

Some of the categories are not clear-cut, and therefore there are some that cover instances carrying two (or even three) possible meanings. Moreover, as the present study covers a wider time-span than Goossens' the categories in which the modal was placed here are:

A Permission

B Negative Permission

C Obligation

A/C Permission/Obligation

D Wish

E Hypothetical

F Ability

A/F Permission/Ability

G Epistemic

Table 1: "MUST – Overall"

	A	B	C	A/C	D	E	F	A/F	G	Total
OE 1	20	2	9	1	1	0	2	0	0	**35**
OE 2	5	0	4	0	0	0	0	0	0	**9**
OE 3	3	2	4	0	2	2	1	0	0	**14**
Total	**28**	**4**	**17**	**1**	**3**	**2**	**3**	**0**	**0**	**58**
ME 1	3	1	2	0	1	0	0	0	0	**7**
ME 2	0	0	3	2	0	1	1	0	0	**7**
ME 3	1	0	1	1	1	0	0	0	1	**5**
ME 4	0	0	8	0	0	0	0	0	0	**8**
Total	**4**	**1**	**14**	**3**	**2**	**1**	**1**	**0**	**1**	**27**
EModE 1	0	0	3	0	0	0	0	0	0	**3**
EModE 2	0	0	2	0	0	0	0	0	0	**2**
EModE 3	0	0	1	1	0	0	0	0	4	**6**
Total	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**0**	**4**	**11**

The table of 'Overall findings' includes both legal and historical texts and seeks to establish a general picture of MUST before moving on to the more genre-specific part of the analysis.

From these, we can observe that the 'obligation' sense becomes increasingly central over time, as is both expected and reported in earlier studies. However, the numbers also clearly show that this sense was quite common already in early OE (OE 1: 850-950), with as much as 25.7% (9) of the instances carrying a meaning of 'obligation'. Nevertheless, the 'permission' sense is still found in 57.1% (20) of the instances, and can thus be characterized as the central meaning of MUST in OE. However, the fact that the 'obligation' sense was so integrated in the language at this early stage of English is certainly an unexpected finding. The earliest reported use of MUST as denoting 'obligation' is according to *OED Online* (*must, v.*[1]) from *Beowulf*, which is dated as originating from somewhere between the 8th and the 11th century. As *Beowulf* might have been written as early as the 8th century, the fact that there were quite a few instances of the 'obligation' sense in the present material would not be a very exceptional finding. However, as this heroic epic poem might be dated as late as the 11th century, there is something quite new in the material from the Helsinki Corpus. The frequent occurrence of the 'obligation' meaning is important. One or two instances recorded do not say more than that it might have been present to some minor extent, but not to such an extent that it is fully integrated into the language, and thus not as crucial to the understanding of the language. However, 25.7% of the instances from OE represent a meaning that is peripherally present, and clearly already on its way into the language as a central meaning.

Looking at the numbers in more detail we observe that in OE 2 (950-1050) 'permission' is conveyed in 55.6% (5) of the instances and 'obligation' in the remaining 44.4%, (4) whereas in OE 3 (1050-1150) the 'obligation' sense is found in 28.6% (4) of all instances and the 'permission' sense has decreased to 21.4% (3). The decrease in the 'permission' sense is more interesting than the percentage of instances carrying the 'obligation' meaning. We may thus observe that the 'obligation' sense already exists as a central meaning in OE 2, and keeps this position through OE 3. The dating of the establishment of 'obligation' as a meaning of MUST could thus be adjusted from ME (or, as put by Van Herreweghe (2000: 237), "(late?) Old English") to OE.

According to these numbers, late OE was a time of confusion for the modals. The instances found cover almost all possible meanings of MUST, and it is recognized that this may indicate a period filled with changes to and developments of the modal. It is clear that the core OE sense is on the way out, and already in mid OE, it is found to be only as frequent as the up-and-coming 'obligation' sense.

Moving on to ME, there is no doubt that this tendency continues. 51.9% (14) of the ME instances carry an 'obligation' meaning, and the occurrences of instances with the 'permission' sense have decreased to 14.8% (4). It is undeniable that by this time, the 'obligation' sense has taken over as the central meaning of MUST. The 'permission' sense is, in fact, not at all found after ME 3 (1350-1420), except possibly in one ambiguous example in late EModE (but probably not, as these numbers show). Accordingly, the development continues in EModE. In addition to this we notice a new development – the development of the epistemic modal meaning of MUST. 54.5% (6) of the EModE instances are 'obligation' senses (possibly 63.6%), while 36.4% (4) have an epistemic meaning. The epistemic sense first occurs only in late EModE (1640-1710), however. This is in accordance with other linguistic works on the semantics of modals, and thus not surprising.

The 'ability' and 'negative permission' senses are of particular interest here. Although neither is represented in high numbers, these senses are both close to 'permission' AND 'obligation', and may thus be the links between the two that made the development possible. 'Ability' lies somewhere between these two senses, and negated 'permission' is very close in sense to 'must not'/'obliged not to', although it still is a 'permission' sense.

It is important to stress the fact that the number of occurrences is very low, and that the tendencies shown by the present data may be inaccurate.

If we look more closely at some examples carrying the 'permission' and 'obligation' sense, we may get deeper into the question of what actually takes place.

Example 1
OE 1: 850-950
Law text

Gif he hine triewan wille, þæt he to þære læne facn ne wiste, þæt he mot.

If he wants to trust him, [in] that he was not aware of the temporary crime, that he may [do].

Example 2
OE 1: 850-950
Law text

Eac swelce, gif mon becume on his gefan, & he hine ær hamfæstne ne wite, gif he wille his wæpen sellan, hine mon gehealde XXX nihta & hine his freondum gecyðe; gif he ne wille his wæpenu sellan, þone mot he feohtan on hine.

Moreover, if a man meets one of his enemies, who he did not know had settled down, if he wants to give his weapon, one holds it for 30 nights and informs his friends; if he does not want to give his weapons, he may fight him.

Example 3
OE 1: 850-950
Law text

Gif mon þonne þæs ofslægenan weres bidde, he mot gecyðan, þæt he hine for þeof ofsloge, nalles þæs ofslegenan gegildan ne his hlaford.

If one then orders this man killed, he may prove that he killed him because he was a thief – [that] the killed [man] does not at all belong to the guild nor his lord.

Example 4
OE 1: 850-950
Historical text

Forđon he aldorlicnisse onfeng from Bonefatio, þam papan, þæt he biscopas hadian moste.

Because he received authority from Bonefatio, the pope, that he was allowed to ordain bishops.

Example 5
OE 1: 850-950
Historical text

Sona þæm erestan tidum, þes þa lareowas cuomon in Fresena lond, & Willbrod from þem cyninge lefnesse onfeng þæt he þær læran moste.

Immediately, in the first times, these teachers came to the Frisian land, and Willbrod accepted licence from the King that he may teach there.

Example 6
OE 1: 850-950
Legal text

Gif hwa his wāpnes ođrum onlāne, þæt he mon mid ofslea, hie moton hie gesomnian, gif hie willađ, to þam were.

If anyone lends another his weapons, with which he kills anyone, they may take them back, if they want to, to the man.

Example 7
OE 3: 1050-1150
Historical text

On þam ilcan steode þe God him geuđe þæt he moste Engleland gegan. he arerde mære mynster. & munecas þær gesætte. & hit wæll gegodade.

In that same place where God granted him that he may go to England, he built another monastery, placed monks there and improved it.

Example 8
ME 3: 1350-1420
Historical text

But for þe grete multitude of hem þat were gilty he moste lete passe what he mygt nougt take of ful wreche.

But for the great multitude of those who were guilty he was permitted to let pass what he might have not taken of full misery.

Example 9
ME 1: 1150-1250
Historical text

He nom ānne spere-scāft; þe wes long & swiđe stārc. & dude a þene ānde; ānne mantel hende. & cleopede to þan Brutten; & bed heom abiden. He wold spācken heom wiđ; & girnen þeos kinges griđ. & mid griđe sende. Uortigerne to londe. To makien his forward; þat he faren moste. wiđ-uten mare sconde; in-to Sax-londe.

He took a spear-shaft that was long and very strong and made a thin breadth; a mantle at hand and called out to the Britons and asked them to abide. He wanted to speak to them, and make peace with their king. And sent Vortigern with peace to land to make his request that he may be permitted to go to Saxland without greater disgrace.

If we look at what is 'permitted' in these examples, we clearly see that it is something **'desirable'**, as put by Goossens (1987b). This meaning is also related to the words with

which the modal collocates. In example 6, the conditional brought into the sentence *'if they want to'* clearly shows that this has to do with permission, not obligation and the same is the case in example 1. Example 3 is probably the clearest example of desirable state of affairs – he is permitted to prove himself not guilty so that he is not killed.

Examples 4, 5, 7 and 9 all show a case of semantic weakening (cf. Goossens) of the 'permission' sense with a verb in collocation that also covers the meaning of 'permission'. In Example 7, God 'granted him a permission', and in Example 4, he 'received authority that he is allowed to' ordain a bishop. In Example 5 Willbrod 'accepted licence', and in Example 9, Vortigern was sent to land 'to make his request'. There are seven instances where the 'permission' sense is weakened by a verb carrying the same sense of 'permission', and it is likely that the use of such verbs alongside MUST could be one of the contributors to the development that occurred, or that the 'permission' sense had been weakened and, thus, one needed to use a verb of 'permission' to ensure that this particular meaning was understood.

Like the 'permission' sense is desirable, the 'obligation' examples show a range of situations with **undesirable** states of affairs. Instances with 'negative permission' have been classified as 'obligation' in this discussion because they for all practical purposes do convey 'obligation'.

Example 10
OE 2: 950-1050
Law text

And gyf man gehadodne mid fæhđe belecge & secge, þæt he wære dædbana ođđe rādbana, ladige mid his magum, þe fæhđe moton mid beran ođđe forebetan.

And if anyone in revenge accuses a priest and says that he be a murderer or an accessory to a murder, exculpated by his kinsmen, the revenged must make legal amends or fight shieldless.

Example 11
OE 1: 850-950
Law text

Eac we cweđaþ, þæt mon mote mid his hlaforde feohtan orwige, gif mon on þone hlaford fiohte; swa mot se hlaford mid þy men feohtan.

Moreover we say that one must fight defenceless with his lord, if one fights against the lord. As must the lord fight with the men.

Example 12
OE 3: 1050-1150
Historical text

þa gerædde seo cyng & his witan eallum þeodscipe to þearfe. þeah hit him eallum laþ wære. þæt man nyde moste þam here gafol gyldan.

Then the king and his councillors consulted [with] all the nation as was needed, although it was loathsome to all of them that they of necessity had to pay tribute to the army.

Example 13
ME 1: 1150-1250
Historical text

Hire seohđe word ich nam to grame. þar-fore ich habbe nu muchele scame;
For nu ich mot bi-secchen; þat þing þat ich ær for-howede.

I took their word to anger, therefore I now have much shame, for now I must beseech that thing that I contempted before.

Example 14
ME 2: 1250-1350
Historical text

þat aboute an þre wouke . þe asaut bituene hom ilaste .
& euere hii wiđinne abide . of sir simon socour .
Vor elles hii moste nede . þe castel gelde & tour .

That the assault between them lasted about three weeks. And always they abide of Sir Socour within, for otherwise they had to (of necessity) give up the castle and tower.

Example 15
ME 1: 1150-1250
Historical text
Þa gon ich to biuien; swulc ich al fur burne.
And swa ich habbe al niht; of mine sweuene swiđe iþoht.
for ich what to iwisse; agan is al mi blisse.
for a to mine liue; sorġen ich mot driġe.

(...) I must sorrows endure.

Example 16
ME 1: 1150-1250
Historical text
& he haueđ to quene; mine dohter þa is scone.
Ah alle his burhges; he scal us bitæchen.
Gif he wule his lif broken; ođer ālles him balu giueđe.
þa wes Uortigerne; vāste ibunden.
Giues swiđe grete; heo duden an his foten.
Ne moste he nauere biten mete; ne wiđ nenne freond speken.

And he has two queens, my daughter who is shun, but all his boroughs he shall entrust us if he wants his life broken, or all evil is given to him. Then Vortigern was driven away bound, Great gifts, they did on foot. He may never eat meat; never speak to any friend.

Example 17
OE 3: 1050-1150
Historical text

Þa wæron þa wælisce men ætforan mid þam cynge. & forwregdon đa eorlas. Þet hi ne moston cuman on his eagon gesihđe. Forđan hi sædon þæt hi woldon cuman þider for þes cynges swicdome.

(...)that they may never come into his eye-vision [i.e. that he never wants to see them) because they said that they would/wanted to come there to deceive the King.

It can be observed from examples 12 and 14 that the adverb *nede* also plays an important role in the 'obligation' sense. Incidentally, according to Traugott (1989) "as far as *must* is concerned, epistemic examples clearly expressing the speaker's assessment of the proposition first occur only in the environment of a strongly epistemic adverb, such as *nedes* 'without doubt'" (1989: 42). This could mean that the presence of this or other adverbs affected the meaning of the modal to such an extent that it forced upon it a change in meaning, and that this happened in both shifts. It occurs in some examples, and ensures a total lack of ambiguity with regard to the meanings of these sentences. This is a topic that should be studied more extensively, as the present discussion only offers a hypothesis. However, the mere presence of this adverb in this context is very interesting.

Examples 10, 11, 13 and 15 show clear instances of undesirable actions, whereas examples 16 and 17 are examples of the instances of negative 'permission' that have been classified as 'obligation'. The reason is simple, as is shown through these examples: *May never* here conveys the meaning 'must' because it is an obligation given through a negative permission.

In attempting to find the path that MUST has taken from 'permission' to 'obligation', the focus has been placed on the 'ability' sense. There are some instances, albeit few, where MUST has an 'ability' meaning. The concept of 'ability' lies somewhere between 'permission' and 'obligation', and can thus be a possible intermediate meaning that served as a bridge between these two senses.

Example 18
OE 1: 850-950
Historical text

Babylonisce þæt æreste & Romane þæt siđmeste hie wæron swa fāder & sunu, þonne hie heora willan moton wel wealdan.

Babylonians [as] the earliest and Romans [as] the latest, they were like father and son when they were able to carry out their will.

Example 19
OE 1: 1050-1150
Historical text

þa wiđlæg Harold eorl his brođor & Beorn eorl, þæt he ne moste beon nan þāra þinga wurđe þe se cyng him geunnen hāfde.

Then earl Harold opposed his brother and earl Bjorn, that he could [would never be able to] never be worthy of any of the things which the King had granted him.

Example 20
ME 2: 1250-1350
Historical text

Ac sir tomas torbeuille . & ođer ssrewen mo .
Wende vp & wiþ strengþe . made him out go .
þo he sei þat he ne moste . habbe churche peis .

But Sir Thomas Torbeville and also other confessors went up and made him go out with force. Though he said that he could not [was unable to] have church peace.

There are a few instances that lie somewhere between ‘permission’ and ‘obligation’, or are difficult to place. As these might have been ambiguous already at the time they were written, instances such as these may have contributed to the development of MUST. When another meaning can be understood from an utterance, both might be considered by the reader/listener, and the optional meaning could have been stored for other situations in which the word in question is used.

Example 21
ME 2: 1250-1350
Historical text

For hem mot huere kyng oðer knyhtes calle, oðer stedes taken out of huere stalle; þer hi habbeþ dronke bittrere þen þe galle, vpon þe drue londe.

Because of them their king may/must call for other knights, other horses taken out of their stable, there, in the beloved land, they have drunk [something] bitterer than gall.

Example 22
ME 3: 1350-1420
Historical text

“Sun,” he said, “þou most now ga to paradis þat I com fra til cherubin þat es þe yateward.”

“Son,” he said, “you must/may now go to paradise that I come from to the cherub that is the gateward.”

Example 23
EModE 3: 1640-1710
Historical text

They depended upon the French king’s assistance: and therefore were earnest in their endeavours to bring about a general peace, as that which must finish their design.

They depended on the French king's assistance, and were therefore earnest in their endeavours to bring about a general peace, as that which may/must finish their design.

Example 24
OE 1: 850-950
Legal text
Gif he hit ðonne dierneð, & weorðeð ymb long yppe, ðonne rymeð he ðam deadan to ðam aðe, þæt hine moton his māgas unsyngian.

If he then hides it, and [it] long afterwards becomes known, [and] he then reveals the deeds with an oath, then his kinsmen may/must exculpate him.

The instances of 'hypothetical' and 'wish' senses were few and not very significant. They generally had other elements in the sentences that played a part in forming the meaning of the clause.

Example 25
OE 3: 1050-1150
Historical text

þa geornde se eorl eft griðes & gisla. þæt he moste hine betellan æt ælc þāra þinga þe man on lede.

Then the earl yearned after peace and security that he may defend himself against each of the things that one brings forward.

Example 26
OE 3: 1050-1150
Historical text

& Gif he moste þa gyt twa gear libban. He hæfde Yrlande mid his werscipe gewunnon.

And if he had lived another two years, he would have won Ireland with his worship.

Example 25 has MUST carrying a hypothetical meaning, whereas in example 26 MUST seems to have a 'wish' meaning. The subjunctive is what plays the lead part in conveying this sense, and the modal is merely a means of bringing it forth. Example 26 is in addition somewhat ambiguous as it can be read as both hypothetical and permission: 'If he had lived...' or 'If he had been permitted to live...'. However, because of the *gif* that introduces the sub-clause and the subjunctive that is connected to this, the most likely translation was considered to be the hypothetical one.

The genre-specific part of the study will be examined next.

Table 2: MUST – historical

	A	B	C	A/C	D	E	F	A/F	G	Total
OE 1	5	0	2	0	1	0	2			**9**
OE 2	0	0	1	0	0	0	0			**1**
OE 3	1	2	1	0	2	1	2			**9**
	6	**2**	**4**	**0**	**3**	**1**	**4**	**0**	**0**	**20**
ME 1	3	1	2	0	1	0	0		0	**7**
ME 2	0	0	2	1	0	1	1		0	**5**
ME 3	1	0	1	1	1	0	0		0	**4**
ME 4	0	0	4	0	0	0	0		1	**5**
	4	**1**	**9**	**2**	**2**	**1**	**1**	**0**	**1**	**21**
EModE 1			3							**3**
EModE 2			1							**1**
EModE 3			1	1					3	**5**
	0	**0**	**5**	**1**	**0**	**0**	**0**	**0**	**3**	**9**

Table 3: MUST – legal

	A	B	C	A/C	D	E	F	A/F	G	Total
OE 1	15	2	7	1	0	0	0	0	0	**24**
OE 2	5	0	3	0	0	0	0	0	0	**8**
OE 3	3	0	1	0	0	1	0	0	0	**5**
	23	**2**	**11**	**0**	**0**	**1**	**0**	**0**	**0**	**37**
ME 1										
ME 2										**0**
ME 3										**0**
ME 4			4							**4**
	0	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**4**
EModE 1										**0**
EModE 2			1							**1**
EModE 3									1	**1**
	0	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**2**

It was hypothesised initially that the figures from the historical texts would show more innovation than the law texts. As there were almost no instances from ME and EModE in the 'Law' section, only numbers from OE can be used for a discussion of the figures. The results were not all as expected. If we look at Table 2, it is noticeable that the 'obligation' reading does not seem to be overwhelmingly present in these texts. However, there exist a number of different readings of MUST in this genre, which indicates that the language is innovative and diverse.

The legal texts actually have a higher percentage of 'obligation' readings in OE 1 than the historical texts do, and this may either be a sign that this reading is more common at this point than what has formerly been thought, or it might be a result of the spoken-like features and language of the oldest English legal texts.

The earliest Epistemic sense that is found is from ME 4 (1420-1500) in a historical text. However, the earliest occurrence reported by the *OED* is from the 13th century in "Floris & Blauncheflur (Cambr.) 521 He moste kunne muchel of art, þat þu woldest yeue þerof part". Thus, it is not surprising to find an example from late ME.

Example 27
1420-1500
History

Yf the kynge wolde have take any execucyon a-pon hyt he moste have take hyt a-pone alle the hoole schyre and contrays there that hys lyflode was.

If the king wanted to have any execution upon it he must have taken it upon the whole shire and countries where his livelihood was.

It should be noted that example 27 could have an 'obligation' and not an epistemic meaning, depending on how it is interpreted. Translated as it is here, it could mean that 'he must must have made the whole shire and countries responsible for it'. However, another interpretation could be that 'he must have it taken upon the whole shire…' where MUST is read with an 'obligation' sense.

However, this does suggest that historical texts can be seen to be more innovative and that the development of the modal in these texts would have taken place earlier than similar development in law texts.

What can be concluded from this brief discussion of the genres is that the earlier development of the 'obligation' sense in historical texts suggests that this sense developed earlier in the language than written records can tell us. However, as these historical texts are the closest we may get to spoken language, they serve as a decent indication of spoken language.

5.3 Summary

It seems as if the 'obligation' sense might have come about earlier than most linguists have dared to suggest. According to the material, it was already present in early OE. This is a very interesting discovery, and should be looked further into.

The path of development is also suggested, albeit not in terms of exact numbers or frequencies of occurrence. The 'ability' sense of this modal is presumed to have served as a bridge between 'permission' and 'obligation', along with the negated 'permission' sense. The 'ability' sense is semantically somewhere between the 'obligation' and 'permission' sense, and the negated 'permission' sense is de facto an 'obligation' sense. The occurrences of the Epistemic sense are also important to notice when tracking the modal's development. In historical texts, there are three instances of the Epistemic reading, and one in legal texts. This does not occur until late EmodE, which is expected. This development is what has been reported in previous studies.

Historical texts and legal texts appear to be interesting genres to work with on account of their differences. However, although some differences are seen in the material, they were not as marked as anticipated. Nevertheless, the meanings employed in the genres are clearly dissimilar; genres thus provide an interesting backdrop for synchronic linguistic differences, but they may also provide good information as to how language developed diachronically.

Obviously, one cannot propose to make any definite conclusions from this material. Nevertheless, the tendencies are fairly clear, and it would have been interesting to expand the search and look at more texts. This is extremely time.consuming, however, and not within the scope of the present thesis.

6. CAN

Section 6.1 takes up the semantics of CAN from Old English to Early Modern English, as these have been presented by previous linguists. In section 6.2, similar studies that have been done on the modal are introduced, serving as the background for the analysis and discussion, which takes place in section 6.3. In the discussion, as in Chapter 5 above, different examples are used to give a picture of the tendencies found in the material, and unclear examples are discussed.

6.1 Semantics

The Old English meaning of CAN is shared between 'to be able to' and 'to know how to'. When the sense of 'to know how to' was completely lost is difficult to date. A Middle English epistemic meaning of CAN is according to Warner "problematic" (1993: 177). He suggests the possibility that it occurred before the Modern English period, but implies that it is highly unlikely. Furthermore, he says that "deontic modality is also later, and clear subjective instances are not found until the nineteenth century" (1993: 177).

The development of CAN is also connected to the development of OE *witan* 'to know', which falls out of use after ME, and of OE *cnawan* 'to know', which has taken over many of the functions of OE *witan, cunnan* and *magan*. These connections will be looked at more thoroughly towards the end of the thesis.

As for the Modern English meaning of CAN, Coates depicts CAN as "the only modal auxiliary where we do not find the Root-Epistemic distinction. The meanings of CAN have usually been discussed under the three convenient headings 'Permission', 'Possibility' and 'Ability'" (1983: 85-86), of which 'ability' is probably oldest.

6.2 Previous work

According to *OED Online (Can v.¹) "s*ince the present was formally a preterite, its meaning 'I know' must have been derived from that of 'I have learned, I have attained to knowledge'". CAN is assumed to derive from the Indo-European *gno-*, which is also the root of *to know*.

Bybee *et al.* (1994) present an overview of the possible predications of CAN at different stages of English, also seen in Bybee (1988):

> (i) mental enabling conditions exist in the agent
> (ii) enabling conditions exist in the agent
> (iii) enabling conditions exist
> for the completion of the main predicate situation (1994: 192).

The first one includes the OE core meaning of *cunnan* 'to know', 'to have intellectual ability', and the second is the sense of 'general ability' and 'permission'. The third would be the root 'possibility' sense. One might try and simplify by saying that the first category applies to the OE meaning, the second to the ME meaning, and the third to the Modern English meaning, but this would be wrong, or at best only partly true. The first category exists, albeit peripherally, up to the end of the EModE period, and the two latter categories co-exist today, just as all three categories at some point in the history of the English language co-existed.

According to Bybee *et al.*

> the transition from mental ability to general ability is easy enough to understand. Since most activities that require mental ability also require some physical ability, *can* would very often be used where both types of ability are required. The idea that *can* was predicating only mental ability would soon be lost (1994: 192).

Gotti *et al.* (2002) suggest that CAN "did not fully qualify as a modal auxiliary before the 17th century and instances of the verb with non-modal values can still be found in the 19th century" (2002: 45). They further explain that in late ME

> the original value of 'being intellectually able to' deriving from the OE 'to know, to know how', gradually gave way to meanings more directly related to physical ability (2002: 56).

A difference in development between *can* and *could* is also recognized. Gotti *et al.* observe that

> E3 [Late EModE] COULD has been found in very few cases with hypothetical values; this suggests that, while CAN has reached a fully grammaticalised status by E3, for COULD (…) the process is still far from completion (2002: 80).

In agreement with Bybee *et al.*, conventionalization of implicature is most likely the path of development CAN took to arrive at an epistemic modal meaning. Bybee *et al.* explain that in this process "the inferences that can be made from the meaning of a particular modal become part of the meaning of that modal" (1994: 196), and continue: "This means that in a substantial number of cases, the hearer is entitled to infer a sense of epistemic possibility along with the literally expressed root possibility sense" (1994: 198).

Thus the progression through history goes from an early stage where a word is understood in a particular sense but another meaning is implied by this original sense, to a stage where the two meanings are found in co-existence, before the implied meaning may take over as the main understanding of a word (cf. Bybee *et al.* 1994: 197).

Bybee *et al.* also explain that

> A shift from agent-oriented to epistemic meaning involves a change in scope. The agent-oriented modal is part of the propositional content of the clause and serves to relate the agent to the main predicate. The epistemic modal, on the other hand, is external to the propositional content of the clause and has the whole proposition in its scope (1994: 198-199).

Another interesting point, made by Goossens (1984), is that "from the moment that the modals can only be used with a following infinitive, they lose their capacity of expressing independent predication in the sentences in which they operate" (1984: 150). This is particularly interesting with CAN because of its full verb status and 'to know' sense in Old English. When CAN is followed by an infinitive, the 'to know' sense is impossible because it requires an object, either present in the sentence or implied. This can be illustrated by example 41 below, where the meaning of *cuđe* would have been 'to know' if *rǣden* were a noun. However, as *rǣden* here represents the verb, no other sense than the 'ability' sense can be understood. Thus the syntactic shift with this modal could have had an impact on the semantics as well, as introduced above in 2.3.

6.3 Presentation and discussion of findings

The above-mentioned categories implied by the three different stages of CAN in Bybee *et al.* will be used to categorize the modals. These would have been

A Full verb 'know'

B Ability

C Permission

B/C Ability/Permission

D Root Possibility

These are the categories that will be used for the purpose of the present study.

Table 4: CAN – Overall

	A	B	C	B/C	D	Total
OE 1	2	2		0		**4**
OE 2	2	3		0		**5**
OE 3	3	2		1		**6**
	7	**8**	**0**	**1**	**0**	**15**
ME 1	9	9	1	1	1	**21**
ME 2	0	1	0	0	0	**1**
ME 3	0	7	1	0	1	**9**
ME 4	0	9	0	1	0	**10**
	9	**26**	**2**	**2**	**2**	**41**
EModE 1	2	13		0	0	**15**
EModE 2	0	14		1	1	**16**
EModE 3	0	15		0	2	**17**
	2	**42**	**0**	**1**	**3**	**48**

The overall figures confirm that the 'ability' sense and the full verb use of CAN both were present from early OE (850-950) as CAN's two central meanings, with half of the instances each. The ability for OE CAN, *cunnan*, to take a direct object is closely related to the sense 'know' that is conveyed by the full verb CAN. As these two senses co-existed, one cannot assume that it was the loss of this ability that changed the meaning of CAN, but it would certainly have affected the verb. One might theorize that the semantic changes that took place forced the verb to lose the object-taking ability that gave it its full verb status, as the 'ability' sense requires a predicate to modalize.

The full verb use of CAN remained peripherally as late as the 19th century, as the last recorded instance is reported by *OED Online* (can v¹) from 1875, but the latest instance found in the present material is from Early Modern English 1 (1500-1570).

The development of CAN is somewhat difficult to trace because the changes in semantics that have occurred are fairly subtle, by which is meant that the sense of 'mental ability' sometimes is difficult to separate from the sense of 'physical ability' and 'ability' might be difficult to separate from 'possibility' and 'permission'. The smooth transitional stages that the modal has gone through might also be a factor in the long-livedness of all the different senses. One sense does not exclude the other, so to speak, because their meanings are similar in nature.

The shared central meaning continues to exist in ME 1 (1150-1250) but here the 'possiblity' and 'permission' readings of CAN enter as peripheral meanings. Perhaps as a result of this, the full verb meaning becomes peripheral, and is actually practically non-existent from ME 2 (1250-1350) onwards with only two occurrences in the EModE material. The results do show a glimpse of what might be read as a sign of this. After the 'possibility'/'permission' reading first occurs, the full verb use of CAN is on its way out. Thus, according to these figures, the 'ability' sense can be classified as the central meaning of CAN from 1250 onwards. After the first occurrence of the 'possibility'/'permission' reading, it holds the ground as a peripheral meaning up to 1710, which is the latest period in the material. As the Present-Day meaning of CAN at this point is not fully developed, this shows what many linguistic reports also have concluded (cf. e.g. Lightfoot 1979): CAN was more resistant to the changes which the modals underwent than all other modals.

However, here as well it is important to keep in mind the low number of frequencies, and that nothing more than tendencies can be seen from such data.

Example 28
850-950
Historical text

Þa he ærest his ārendwrecan sende to Eadbolde hire brеđer, se wæs þa Contwara cyning, & þisse fāmnan gemanan bæd & wilnade, ondswarede he þæt þæt alyfed nāre, þætte cristeno fāmne hāđnan men to wife seald wære, þy lās se geleafa & þa geryno þæs heofonlecan cyninges mid þās cyninges gemanan aidlaid wære, se đe þās sođan cyninges bigong ne cuđe.

When he first sent his messenger to Eadbolde, their brother, who was the king of Kent, and asked for this virgin in marriage, he answered that it was not allowed that christian virgins were given to marry heathen men, lest the faith and the sacrament in the heavenly king remain with the king's freed society, he who the true king's worship never knew.

Example 29
850-950
Historical text

& siþþan on Thesali he þæt gewinn swiþost dyde for þære gewilnunge þe he wolde hi him fultum geteon for heora wigcrāfte, for þon hie cuþon on horsum ealra folca feohtan betst.

(...) because they of all people could fight best on horses.

Example 30
950-1050
Legal text

And on Dena lage lahslites scyldig, butan he geladige, þæt he na bet ne cuđe.

And according to Danish laws guilty of a violation of the law, unless he excused that he didn't know any better.

Example 31
950-1050
Legal text

Forþam, understande se đe cunne, mycel is & māre þæt sacerd ah to donne folce to þearfe, gif he his Drihtne gecwemeđ mid rihte.

For this reason, [let him] understand who can, there is much and more that [a] priest owes to give to the people of necessity, if he pleases his Lord rightfully.

Example 32
1050-1150
Legal text

Man sceal habban wængewædu, sulhgesidu, egeđgetigu & fela đinga, đe ic nu genāmnian ne can.

One shall have a sea port, appurtenance of a plough, rake-tie and many things, which I cannot mention now.

Example 33
950-1050
Historical text

& đās on mergen forbārndon þone ham æt Peonho, & æt Glistune, & eac fela godra hama þe we genemnan na cunnan, & foran đa eft east ongean ođ hy coman to Wiht;

And these burned the house at Pen in the morning, and at Broadclyst, and many other good homes that we cannot name, and went onwards east afterwards until they came to the Isle of Wight.

Example 34
1050-1150
Historical text

Se cyng mid his here ferde toweard Hrofeceastre. & wendon þæt se biscop wāre þārinne. Ac hit wearđ þam cynge cuđ þet se biscop wæs afaren to đam castele a Pefenesea.

The king went with his army towards Rochester and [they] thought that the bishop was in there, but it became known to the king that the bishop had gone to the castle of Pefenesea.

Example 35
1050-1150
Historical text

Her Eadsige arcebiscop forlet þet biscoprice for his untrumnisse. & bletsode þær to Siward abbot of Abbandune to biscope be þās cynges lāfe & rāda. & Godwines eorles. Hit wæs elles feawum mannum cuđ ær hit gedon wæs.

At this time archbishop Eadsige left that bishopric on account of his illness and consecrated there Siward, abbot of Abbandune, to be bishop, before the king's widow and counsellor, and Godwin's earls. Otherwise, it was known to few men before it was done.

Example 36
1150-1250
Historical text

He halt here fauwerti cnihtes; daies and nihtes.
He haueth her þas þeines; and alle heore swaines.
Hundes and hauekes; þer-uore we habbet harmes.
And nowher heo ne spedet; and auere heo spenet.
& al þat goud þat we hem doð; heo hit bluðeliche vnder-foð.
And cunnen us vn[{ð{]onc; for ure wel-dede.

He had an army of forty knights; days and nights.
He had at this time the warriors and all their squires.
Dogs and hawks, therefore we have armies
And they did not prosper anywhere; and ever it spent
And all the good we did to them; they held it bloodily under-foot
And could "un-thank" us, for our good deeds.

Example 37
1350-1420
Historical text

Wit þat stan he laid in sling,
Sua stalworthli he lete it suing
Þat in his frunt þe stan he fest,
Þat bath his eien vte can brest;

With that stone he laid in the sling
So strongly he let it swing
That he fastened the stone in his front
So that both his eyes can be injured.

Example 38
1350-1420
Historical text

Quen merci sagh him suagat be
Of him sco can haf pite

Queen mercy saw him be diminished
She <u>can</u> have pity on him

Examples 28 and 29 are opposites from OE 1 (850-950), the former being a full verb use of CAN, while the latter carries the 'ability' sense. Examples 30 and 31 demonstrate the same from the period OE 2 (950-1050). Examples 32 and 33 are both negated, and are of some interest because they could be understood as the full verb sense, as an 'ability' reading **or** as a 'permission' reading. However, as CAN modalizes another verb, the 'ability' or 'permission' sense must be understood. But the ability to name something is closely related to 'knowing' something, and thus examples such as these can be some sort of descendants of the full verb use of CAN, and still be partially understood as 'to know' although the 'ability' sense at this point is fully integrated into the language. Further, "I cannot mention" can mean 'I do now know/ I am not able', but it could also mean 'there wouldn't be time to mention all', which may be as close to 'permission' as 'ability'.

Examples 34 and 35 are instances where the past participle form of *cunnan* is used, and these carry the full verb sense 'to know'. In the present material, the ability sense is never present when CAN has full verb syntactic properties.

Examples 36, 37 and 38 are all read as 'possibility', although here, too, there is some ambiguity. All of these examples could have been understood as carrying the 'ability' sense. As modality is subjective, others might disagree on this. However, after careful consideration, the conclusion that these were all 'possiblity' readings was made. These might also show traces of the implicated meaning of the modal. Thus, where a 'possibility' reading is plausible, this may lead to the development of the 'possibility' sense, simply because it could be understood as that.

The occurrence of a full verb reading of CAN in eModE is very interesting, as this is quite uncommon at the time. However, CAN still has a varied range of meanings at this period in time.

Example 39 is an example of this sense:

Example 39
EmodE 1: 1500-1570
Legal text

(…) some also <u>can</u> no leres on the boke soofarfurth that co~mon Artific~s as Smythes Wevers and Women boldely and custumably take upon theim grete curis and thyngys of great difficultie (…)

(…) some also <u>know</u> no learnings of the book to the extent that common artificials [artists] as smiths, weavers and women boldly and customarily take upon them great cures and things of great difficulty (…).

Some examples were difficult to place, or were interesting because of other factors. They are presented here to give insights into the considerations taken when interpreting and categorizing the verbs:

Example 40
EmodE 2: 1570-1640
Legal text

(…) shall bringe unto the Toltaker or other Officer aforesaide of the same Fayre or Markett, one sufficient and credible p~son that <u>can</u> shall or will testifye and declare unto and before suche Toltaker Booke keeper or other Officer (…)

(…) shall bring to the tolltaker or other aforementioned officer of the same fair or market one sufficient and credible person who <u>can</u>, shall or will testify and declare unto and before such tolltaker, book-keeper or other officer (…)

Example 41
ME 1: 1150-1250
Historical text

Þa andswerede a wis mon; þe wel <u>cuđe</u> rǣden.

Then a wise man answered, who <u>could</u> advice well
[who could give good advice]

Example 40 shows how ambiguous a proposition may be. Here, CAN is used to serve as a contrast to two other modals, which normally helps determine the semantics. However, this is not the case in this instance. 'Ability' and 'permission' are very close semantically and it is not known whether CAN in this proposition conveys 'ability' or 'permission'. Both are feasible, and as mentioned in passing above, this ambiguity might have been a force in the changing semantics of the modals.

Example 41 is quite interesting. *Rǣden* is interpreted as being the verb *rædan* 'to give advice'. However, the normal ending of an infinitive is *–an*. This might suggest that the lexeme actually is the noun *rǣd* 'advice'. This would then be an expression that is similar to the Norwegian expression *visste råd* – literally translated "knew advice". However, as this is a strong, masculine noun, the accusative ending would have been *–as*, and not *–en*. Thus the evidence for it being a verb outweighs the arguments of it being a noun, and it has been interpreted as *could give good advice*, and thus as the 'ability' sense instead of the full verb sense. Another interesting factor in this proposition is how close the sense is to the 'to know' meaning of the full verb CAN. To be able to give good advice is very close 'to know'. This shows how closely tied all the various meanings of CAN are, and how gliding the transitions between meanings are.

The remainder of this section will examine the different genres.

Table 5: CAN – historical

	A	B	C	B/C	D	Total
OE 1	2	2				**4**
OE 2		2				**2**
OE 3	2	2				**4**
	4	**6**	**0**	**0**	**0**	**10**
ME 1	9	9	1	1	1	**20**
ME 2		1				**1**
ME 3		7	1		1	**9**
ME 4		2		1		**3**
	9	**19**	**1**	**2**	**2**	**33**
EModE 1	1	12				**13**
EModE 2		11			1	**12**
EModE 3		14			2	**16**
	1	**37**	**0**	**0**	**3**	**41**

Table 6: CAN – legal

	A	B	C	B/C	D	Total
OE 1						**0**
OE 2	2	1				**3**
OE 3	1			1		**2**
	3	**1**	**0**	**1**	**0**	**5**
ME 1						**0**
ME 2						**0**
ME 3						**0**
ME 4		7				**7**
	0	**7**	**0**	**0**	**0**	**7**
EModE 1	1	1				**2**
EModE 2		3		1		**4**
EModE 3		1				**1**
	1	**4**	**0**	**1**	**0**	**7**

When looking at the genres separately, it is quite obvious that one can use the historical texts to anticipate the direction of the changes that are occurring more accurately than would be possible with legal texts. Historical texts show earlier signs of development; in other words, they are less reluctant to use more innovative meanings than the legal genre. However, it should be kept in mind that the figures may be misleading as there were few instances of CAN in legal texts. Incidentally, it is surprising that CAN should have fewer occurrences in the law texts in the material than MUST, as MUST is reported as seldomly used in the law genre (cf. Williams 2005). Whether or not this is a tendency that has changed over time would be an interesting topic for further research. However, due to time and space limitations, the answer cannot be pursued in the present study.

The full verb vs. 'ability' opposition and development is similar in both genres, but what is interesting in this context is the occurrence and non-occurrence of the 'possibility' and 'permission' senses. These senses are not found in legal texts at all, while they (percentage-wise) are peripherally present in the history genre.

6.4 Summary

The long-lasting development of CAN makes it difficult to reach a definite conclusion. There are traces of all senses up to the Early Modern English period. First, what this does is to invalidate Lightfoot's (1979) claim that the modals underwent a radical re-analysis. There should not have been any trace of the pre-reanalysis senses and syntax if this were the case. Second, it suggests that CAN always has had a varied range of meanings that make this modal a curiosity in the sense that it might have been extremely ambiguous or had a wide range of meanings throughout the history of the English language.

There are tendencies pointing to the fact that the 'ability' sense was present at an early stage. This is interesting, but not surprising. It is known that CAN developed slowly. However, the reason CAN develops at another pace than the rest of the modals should be a topic for further inquiry. It is hard to find suggestions as to what separates this particular pre-modal from the other pre-modals, but if one were to look at the types of words with which CAN collocates,

or the semantics of the words with which it surrounds itself, one might find a suggestion as to why CAN behaves the way it does.

7. SYSTEMIC CONSIDERATIONS

Although CAN and MUST are quite different today semantically, the developments of the two are in fact connected through a third preterite-present, *magan* (>MAY).
The common ground between *cunnan* and *magan* is that of 'ability'. *Cunnan* denoted 'mental capability' whereas *magan* carried the meaning of 'physical capability'. Visser (1969) accounts for the relationship of the two verbs in Old English:

> In Old English, in which *magan* (>*may*) denoted physical capability, *cunnan* (>*can*) was used to express mental or intellectual capability. Its meaning was something like 'to know how to'. The two verbs are often contrasted in one and the same utterance, e.g. O.E. Chron., an 1137, 'i ne can ne i mai tellen alle þe wunder ne alle þe pines' (1969: 1734).

Goossens (1987b) suggests that *magan* changes its meaning towards the present-day meaning of MAY because of the changes that occurred with *cunnan*. He explains that "MAGAN moves further into external possibility, because CUNNAN has started to express internal possibility; MAGAN will open up its external range to include permission, because MOTAN is moving into obligation" (1987: 235). This is a plausible theory, but one cannot say for certain which change affected the other. As the development of CAN works as slowly as it does, it is tempting to suggest that CAN was affected by MAY, and not the other way around, as Goossens suggests. This theory is supported by Warner (1993) who proposes that "presumably in response to MAY's shift in sense, CAN also develops a sense of more general ability" (1993: 177). However, this would at this point be mere speculation.

The current and previous meanings of CAN have also been expressed by other verbs in early English. *Cnāwān* (> *know*) covered the same meaning as *cunnan*, and according to *OED Online (know, v.)* it is "held to be from the same root (*gen-*, *gon-*, *gn-*) as CAN". *Witan*, 'to be aware of or conscious of, know, understand; observe, perceive', is another verb that covered the same ground as *cunnan*. As these two verbs could both be used to express the same meaning as could *cunnan*, it would make sense for the verbs to develop semantically, not to be eroded, as *witan* actually was.

MUST is also connected to *magan*, as it 'took over' the pre-semantic change sense of MUST when MUST developed a new meaning. In Visser's presentation of how to express

'permission' in Old and Middle English, he says that "the present tense of the auxiliary *motan* (=be allowed) was very frequently used in the Old English period; in Middle English it tended to give way to *may*, gradually became moribund, and eventually fell into disuse in the beginning of the sixteenth century" (1969: 1791). According to Warner (1993) "As it [MUST] becomes a modal of necessity and obligation, much of its range is taken over by MAY, which becomes less subject-oriented than in Old English" (1993: 177). No matter which of the modals affected the other, or whether they affected each other mutually, there is no doubt that the connection is there. One semantic shift gives way for the previous meaning to be covered by another verb.

It is interesting to note that although these two modals were historically connected in a sense by *magan*, which served as a link between them, they moved in different directions. CAN started in the cognitive domain with the sense 'to know' and moved towards the socio-physical world with the 'ability', 'permission' and 'possibility' senses. MUST was originally in the socio-physical world, carrying a 'permission' sense, but went towards a more mental domain in developing an epistemic sense.

A connection is seen throughout the entire system of modals, and a semantic change in one of the modals seems to have affected all the other verbs, and thus we may talk of a "large-scale shift" in the semantics of most of the preterite-presents from late Old English to the present day. As a result of this, one cannot look at the semantic development of a single element from this group because it is either affected by or affects other modals. Thus the changes should be seen in light of the group as a whole. If not, one only has a partial picture of the development.

8. CONCLUSIONS AND TOPICS FOR FURTHER INQUIRY

The purpose of the present thesis has been to establish how the modal auxiliaries CAN and MUST have behaved semantically throughout the history of the English language, and if they are used differently in the two genres of legal texts and historical texts.

The most important finding is the presence of the 'obligation' sense of MUST in Old English. This is quite surprising, and something that should be looked into more thoroughly. Using historical texts as one's data would function well in this respect because of their closeness to spoken language. The development of the language would be seen earlier in these texts than in other genres, although the difference is not as marked as assumed prior to the present study. However, the differences are present, and the more innovative a text, the more advanced its language, and the more one might discover of the development of the language. The 'obligation' sense is accounted for in Old English by the *OED*, but it has not been reported in previous studies to be quite as common as the current material shows. The peripheral meaning seems to have been clearly moving towards becoming a central one, or had perhaps already become a central meaning, in (mid) OE.

The 'ability' sense and the negated 'permission' sense function as a bridge between the 'permission' and 'obligation' sense with MUST, and these are particularly present in the Historical genre. In fact, the historical texts have a wider range of types of modality than what is found in legal texts, as was anticipated at the beginning of this process. This shows the innovativeness of this genre, and also that the genre is not restricted in terms of prescriptive language use.

It is also interesting to follow the development of epistemic modality with MUST, and the fact that this type of modality practically does not exist in the Law genre. However, this was anticipated. The Law genre has a special type of language, and uses only certain kinds of modality. Epistemic modality is not something that is used often in prescriptive legal texts. Nevertheless, this may be due to the fact that this genre does not use as innovative a language at this point in time. This should be explored further, but could be a topic for a paper or article directed more specifically towards genre analysis than grammatical analysis.

CAN has proven itself difficult to place. As the transitions from one sense to another are quite subtle, it is difficult to see when, where, or why these transitions happened.

What can be summarized from the analysis is that there co-existed a high number of different meanings of the verb, which shows a sort of robustness of the modal. This suggests two ways of viewing the modal. One can either say that it very easily changes because it takes a lot of new meanings easily; or one might suggest that it is not very innovative, or in other words, it is quite reluctant to change, because it keeps the senses for such a long time before they are lost. Both would be appropriate, and this shows how contradictory CAN in itself is, and thus there are problems in categorizing it accurately and precisely. Nevertheless, CAN is a very interesting modal, both with regard to present and historical stages of the language, and should be looked into more thoroughly.

If one were to look at the same modals in a larger corpus, one might find better evidence for what has been suggested in the present thesis. In such an investigation one could look at more genres to study how other and more genres treat the modals. In a larger-scale investigation one should look at the period between 1710 to the present day as well, as there might have been some subtle changes to the modals in the late Modern period. In particular CAN, which has been proven quite special among the modals, may perhaps have shown even more changes from the 18th century up to the present.

Three other topics have been brought up throughout the present study, which could be pursued in a possible large-scale study of the current topic. The recurrence of *nedes* and similar adverbs should be included in such a study. It seems as if it has had an impact on MUST and its development, and might have influenced other modals as well. The relationship between the syntax and semantics of CAN and MUST as a reason for change is an interesting aspect of their development. There might be some clues as to why all these changes occurred in the development of their syntax. When working with syntax, the evidence is easily found in the immediate co-text, whereas with semantics, one needs to carefully weigh different interpretations against each other, except for some instances, where the co-text gives you enough information to categorize the words with which you are working unambiguously.

The category of modal verbs is an exciting field of research, and a lot remains to be discovered. A fact to be kept in mind regarding this group of verbs, however, is that the

meanings of modal elements often are subjective, and therefore it might be difficult to settle on absolute truths about them. As previous work shows, there is to date little consensus on how to even define modal verbs and modality. Nevertheless, linguistic research in this field should be encouraged, perhaps exactly because of the subjectiveness of modality.

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